KV-32TS20/32TS35

RM-791 RM-Y102

SERVICE MANUAL

US Model

KV-32TS20

Chassis No. SCC-E54E-A

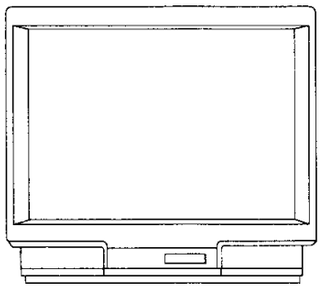
KV-32TS35

Chassis No. SCC-E54C-A

Canadian Model

KV-32TS35

Chassis No. SCC-E65C-A



KV-32TS35

RM-Y102

LN-1 CHASSIS

MODELS OF THE SAME SERIES	
KV-32TS20	KV-27TS31
KV-32TS35	
KV-27TS27	

SPECIFICATIONS

Television system	American TV standards
Channel coverage	VHF: 2-13 UHF: 14-69 Cable TV: 1-125
Picture tuve	Microblack ™ Trinitron® tube 32-inch picture measured diagonally 34-inch picture tube measured diagonally
Antenna	75-ohm antenna terminal for VHF/UHF
Input	VIDEO and S VIDEO S VIDEO in (4-pin mini DIN) Y: 1 Vp-p, 75-ohms unbalanced, sync negative C: 0.286 Vp-p (Burst signal), 75-ohms Video (phono jacks): 1 Vp-p, 75-ohms unbalanced, sync negative Audio (phono jacks): 500mVrms (100% modulation) Impedance: 47 kilohms
Output	AUDIO OUT (VARIABLE) (phono jacks) More than 408 mVrms at the maximum volume setting (variable) Impedance: 5 kilohms
Speaker output	5W x 2
Speaker size	120x60x2 (4 3/4 x 2 3/8 IN.)
Audio frequency response	80 Hz–20 kHz
Power requirements	120V AC, 60 Hz

Power consumption	KV-32TS20	185W
	KV-32TS35	195W
	Standby mode	5W
Dimensions (w/h/d)	KV-32TS20 712 x 781 x 579mm (28 1/8 x 30 3/4 x 22 7/8 in.) KV-32TS35 712 x 781 x 579 mm (28 1/8 x 30 3/4 x 22 7/8 in.)	
Weight	KV-32TS20 71 kg (156 lbs 9 oz) KV-32TS35 71 kg (156 lbs 9 oz)	
Supplied accessories	KV-32TS20 Remote Commander RM-791 (1) with 2 size AA (R6) batteries KV-32TS35 Remote Commander RM-Y102 (1) with 2 size AA (R6) batteries	
Recommended accessories	U/V mixer EAC-66 Connecting cable VMC-810/820S, YC-15 V/30V, RK-74A	

Design and specifications are subject to change without notice.

MICROFILM

TRINITRON® COLOR TV

SONY®

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(CAUTION)

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

WARNING!!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.
THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL TO SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

(ATTENTION)

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURTCIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

ATTENTION!!

AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHÁSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DEPANNAGE. LE CHÁSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ Á L'ALIMENTATION SECTEUR.

ATTENTION AUX COMPOSANTS RELATIFS ÁLA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET PAR UNE MAPQUE ⚠ SUR LES SCHÉMAS DE PRINCIPE, LES VUES EXPLOSÉES ET LES LISTES DE PIECES CONT D'UNE IMPORTANCE CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÉCE EST INDIQUÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY. LES RÉGLAGES DE CIRCUIT DONT L'IMPORTANCE EST CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT SONT IDENTIFIES DANS LE PRÉSENT MANUEL. SUIVRE CES PROCÉDURES LORS DE CHAQUE REMPLACEMENT DE COMPOSANTS CRITIQUES, OU LORSQU'UN MAUVAIS FONCTIONNEMENT EST SUSPECTÉ.

SAFETY CHECK-OUT

(US Model only)

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.

2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.

3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.

4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair Point them out to the customer and recommend their replacement.

5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.

6. Check the line cord for cracks and abrasion. Recommend the replacement of any such line cord to the customer.

7. Check the condition of the monopole antenna (if any). Make sure the end is not broken off, and has the plastic cap on it. Point out the danger of impalement on a broken antenna to the customer, and recommend the antenna's replacement.

8. Check the B+ and HV to see they are at the values specified. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.

9. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.

2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

HOW TO FIND A GOOD EARTH GROUND

A cold-water pipe is guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth-ground, verify that it is at ground by measuring the resistance between it and a coldwater pipe with an ohmmeter. The reading should be zero ohms. If a cold-water pipe is not accessible, connect a 60-100 watts trouble light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side of the line, the lamp should light at normal brilliance if the screw is at ground potential. (See Fig. B)

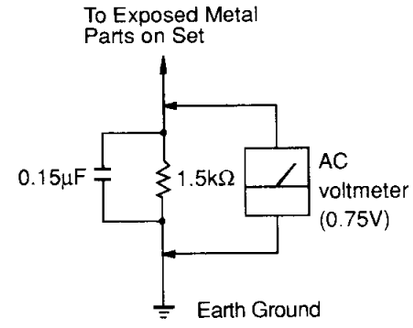


Fig. A. Using an AC voltmeter to check AC leakage.

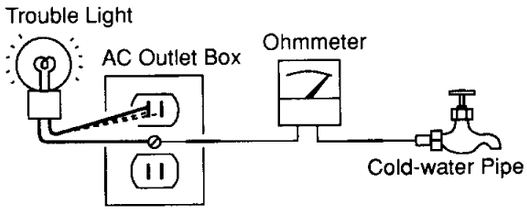
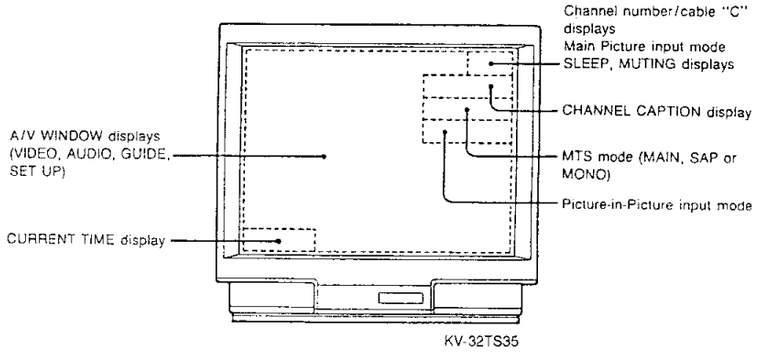


Fig. B. Checking for earth ground.

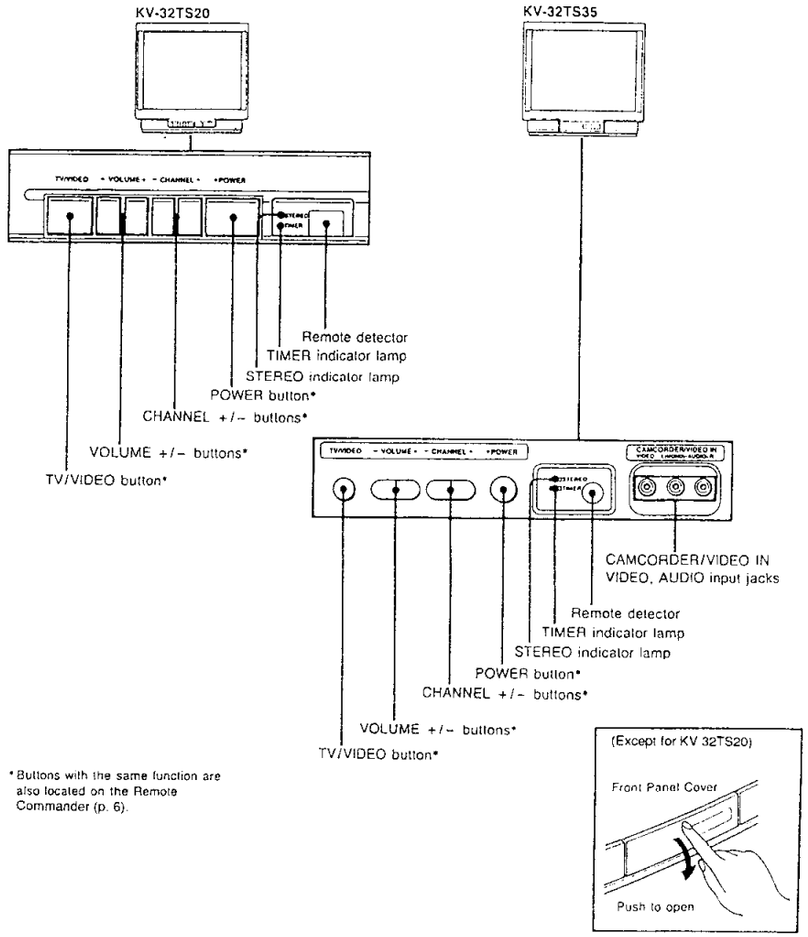
SECTION 1
GENERAL

1-1. LOCATING THE CONTROLS

Screen Displays

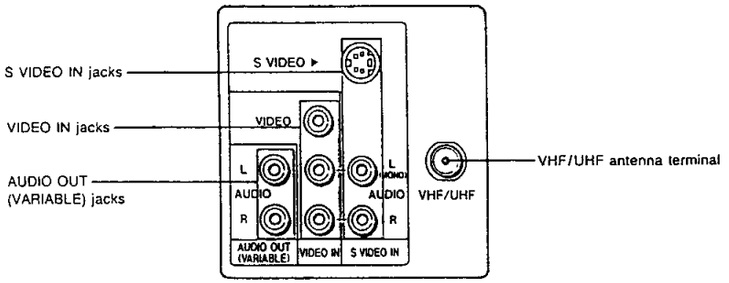


Front Panel



* Buttons with the same function are also located on the Remote Commander (p. 6).

Rear Panel



Identifying Your TV

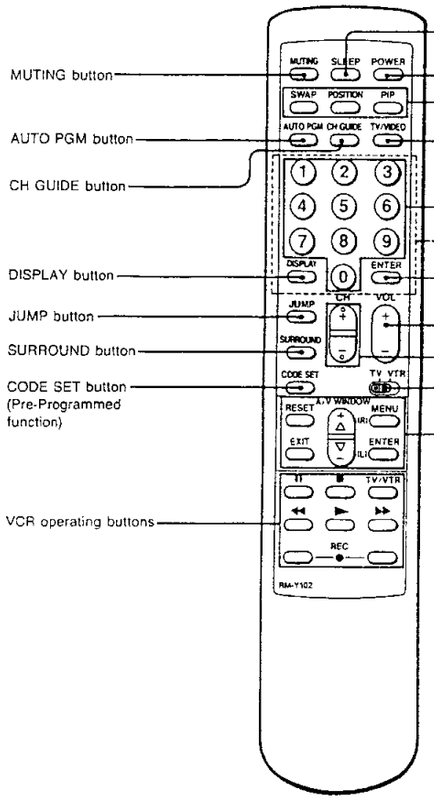
Check the model number of your TV set.
This manual covers five models and there are slight differences among them. Check the table below to see what is equipped with your TV before you begin operating it.

Instructions in this manual are based on model KV-32TS35 (one of the models with maximum number of features) and Remote Commander RM-Y102. If you have a different model, please disregard any information that does not apply to your TV.

Table of models **YES: equipped** **NO: not equipped**

	KV-27TS27	KV-32TS20	KV-27TS31	KV-32TS35/KV-32TW75
Picture-in-Picture feature	NO	NO	NO	YES
Pre-Programmed feature	NO	NO	YES	YES
SURROUND system	YES	YES	YES	YES
Front panel A/V jacks	NO	NO	YES	YES
VARIABLE AUDIO OUT jacks	YES	YES	YES	YES
S-VIDEO IN jacks	NO	YES	YES	YES
Remote Commander	RM791	RM791	RM-Y101	RM-Y102

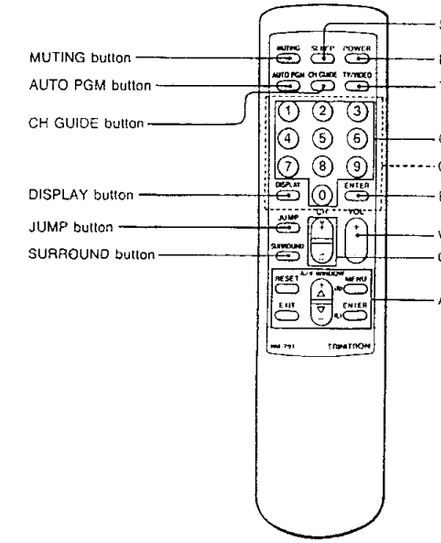
Remote Commander



RM-Y102: KV-32TS35

* Buttons with the same function are also located on the TV (p. 4).

** Buttons not included on RM-Y101.



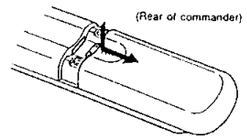
RM-791: KV-32TS20

* Buttons with the same function are also located on the TV (p. 4)

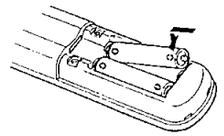
WARNING
Batteries may explode if mistreated. Do not recharge, disassemble or dispose of in fire.

Installing Batteries

1 Remove the battery compartment cover.



2 Insert two size AA (R6 batteries in correct polarity.

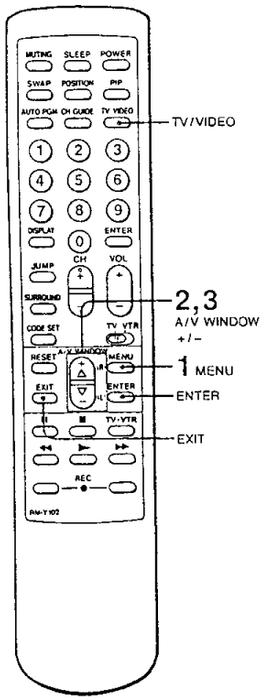


Battery life
With normal operation, batteries will last up to half a year. If the Remote Commander does not operate properly, the batteries might be exhausted. Replace both with new ones.

To avoid damage from possible battery leakage
Remove the batteries when you will not be using the Remote Commander for a fairly long time.

1-2. TURNING THE CABLE MODE ON OR OFF

All of the controls are on the Remote Commander.



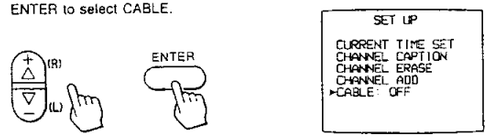
If you have cable connected to your TV, follow the steps below to turn the cable connection on or off. Cable mode is preset to ON when you use your TV for the first time; turn cable OFF to preset or watch VHF or UHF channels (pp. 7 - 9).

1 Press MENU to display the following screen.

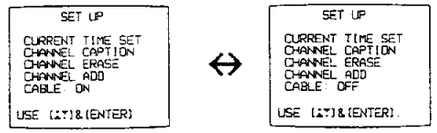
2 Press the +/– button to select SET UP.

Press ENTER.

3 Press +/– button and ENTER to select CABLE.



Press the +/– button and ENTER to select ON or OFF alternately.



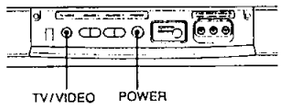
To return to TV mode.
Press EXIT.

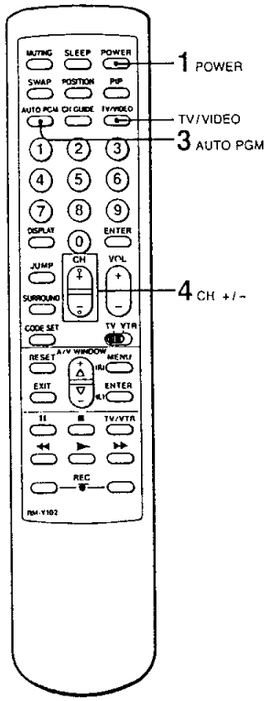
Notes

- You cannot set CABLE ON/OFF while the TV is in VIDEO mode. Before setting, select TV mode by pressing TV/VIDEO.
- The menu will be cancelled automatically after 10 seconds if you do not push any buttons during that time.

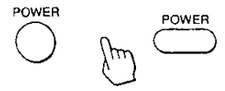
1-3. PRESETTING TV CHANNELS

Presetting TV Channels Automatically





1 Press POWER on the TV or the Remote Commander to turn the TV on.



2 Turn the cable connection on or off, depending on if you want to preset cable or VHF/UHF channels.

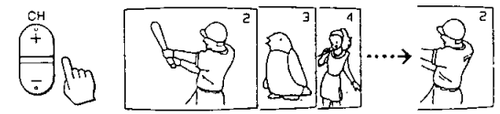
(FOLLOW THE STEPS ON P. 7)

If "VIDEO" or "S VIDEO" is displayed on the screen, press the TV/VIDEO button on the TV or the Remote Commander so that a channel number appears.

3 Press AUTO PGM.

"AUTO PROGRAM" is displayed on the screen and receivable channels (other than the channels already preset) will be preset in numerical sequence. The channels previously preset remain in the TV's memory.
When no more channels can be found, the programming stops and the lowest numbered channel is displayed.

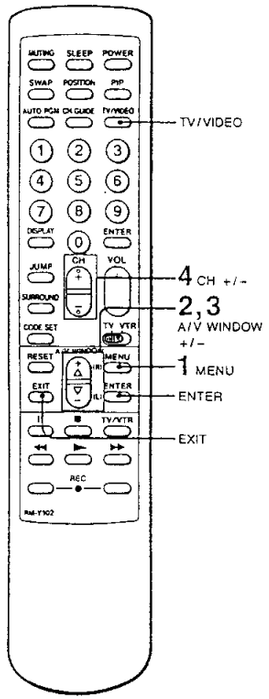
4 Press CH +/– to check or view preset channels.



Channels that can be received on this TV:
VHF: 2 — 13
UHF: 14 — 69
Cable: 1 — 125

To erase unnecessary channels, or to add channels that could not be preset automatically because their signal strength was too weak, follow the steps in "Erasing Unnecessary Channels" (p. 8) and "Presetting Only Desired Channels" (p. 9).

Erasing Unnecessary Channels —CHANNEL ERASE



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Use this feature to erase non-receiving channels from the channel scan memory.

Note

You cannot use CHANNEL ERASE while the TV is in VIDEO mode. Before erasing channels, select TV mode by pressing TV/VIDEO.

1 Press MENU to display the following screen.

MENU

```
A/V WINDOW
▸VIDEO
 AUDIO
 GUIDE
 SET UP
USE [▲▼] & [ENTER]
```

2 Press the +/– button to select SET UP.

(R) (L)

```
A/V WINDOW
 VIDEO
 AUDIO
 GUIDE
▸SET UP
USE [▲▼] & [ENTER]
```

Press ENTER.

ENTER

```
SET UP
▸CURRENT TIME SET
 CHANNEL CAPTION
 CHANNEL ERASE
 CHANNEL ADD
 CABLE : ON
```

3 Press the +/– button to select CHANNEL ERASE.

(R) (L)

```
SET UP
 CURRENT TIME SET
 CHANNEL CAPTION
▸CHANNEL ERASE
 CHANNEL ADD
 CABLE : ON
```

Press ENTER.

ENTER

```
ERASE                 6
USE [CH+, -]
TO SELECT THE CH.
THEN PRESS [ENTER]
TO ERASE.
```

4 Press the CH +/– button to select the channel you want to erase.

CH

```
ERASE                 8
USE [CH+, -]
TO SELECT THE CH.
THEN PRESS [ENTER]
TO ERASE.
```

Press ENTER.

A "–" appears before the channel number, showing that the channel has been erased from the channel scan memory.

ENTER

```
ERASE                 8
USE [CH+, -]
TO SELECT THE CH.
THEN PRESS [ENTER]
TO ERASE.
```

The next time you press the CH +/– buttons, channel 8 will be skipped.

Repeat step 4 to erase other channels.

To return to TV mode

Press EXIT.

Note

When you erase a VHF or UHF channel, the cable TV channel with the same number is also erased, and vice versa.

Cable TV channel chart*

Cable TV systems use letters or numbers to designate channels. To tune in a channel, refer to the chart below.

Number on this TV	Corresponding cable TV channel
1	A-8
5	A-7
6	A-6
14	A
15	B
16	C
17	D
18	E
19	F
20	G
21	H
22	I
23	J
24	K
25	L
26	M
27	N
28	O
29	P
30	Q
31	R
32	S
33	T
34	U
35	V
36	W
37	W + 1
38	W + 2
39	W + 3
⋮	⋮
93	W + 57
94	W + 58
95	A-5
96	A-4
97	A-3
98	A-2
99	A-1
100	W + 59
101	W + 60
102	W + 61
⋮	⋮
123	W + 82
124	W + 83
125	W + 84

* This designation of cable TV channels conforms to the EIA/NCTA recommendation.
Check with your local cable TV company for more complete information on the available channels.

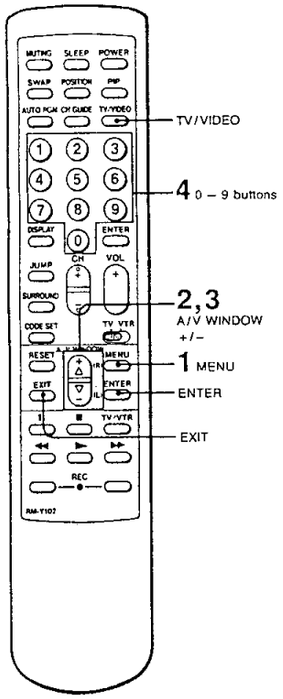
1-4. WATCHING TV PROGRAMS

Presetting Only Desired Channels — CHANNEL ADD

Use this feature to add channels one by one to the channel scan memory.

Note

You cannot use CHANNEL ADD while the TV is in VIDEO mode. Before adding channels, select TV mode by pressing TV/VIDEO.



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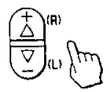
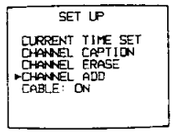
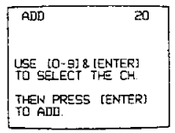
1-2 (FOLLOW STEPS 1 & 2 ON PAGE 16)

3 Press the +/– button to select CHANNEL ADD.

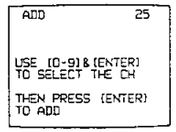




Press ENTER.

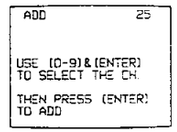


4 Press the 0 – 9 buttons to select the channel you want to add. For example, to add channel 25, press 2, 5 and ENTER.



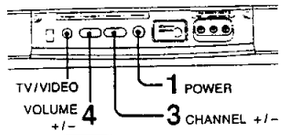
Press ENTER again.

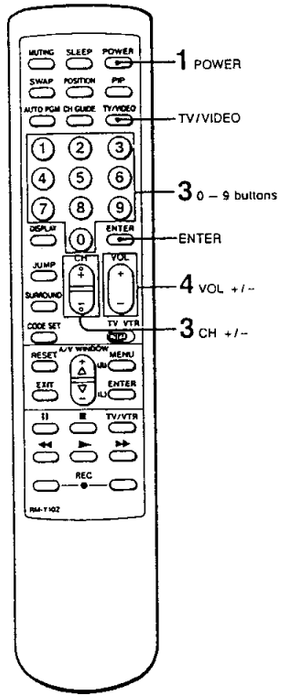
A "+" appears before the channel number, showing that the channel has been added to the channel scan memory.



Repeat step 4 to add other channels.

To return to TV mode
Press EXIT.





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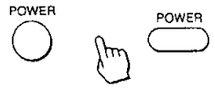
1 Press POWER on the TV or the Remote Commander to turn the TV on.



2 Turn the cable mode on or off, depending on if you want to watch cable or VHF/UHF channels.

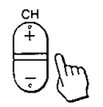
(FOLLOW THE STEPS ON P. 7)

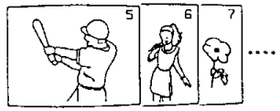
If "VIDEO" or "S VIDEO" is displayed on the screen, press the TV/VIDEO button on the TV or on the Remote Commander so that a channel number appears.

3 Select a channel in one of the following two ways:

To scan the preset channels* in numerical sequence

Press CH +/–.



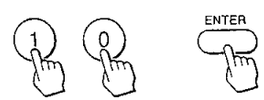


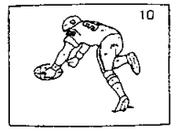
* For more on presetting channel, see pp. 7 - 9.

To select a channel directly

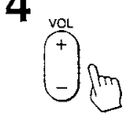
Press the channel number button(s) and then ENTER.

For example, to select channel 10, press 1, 0 and ENTER.





4 Press VOL +/– to adjust the volume.



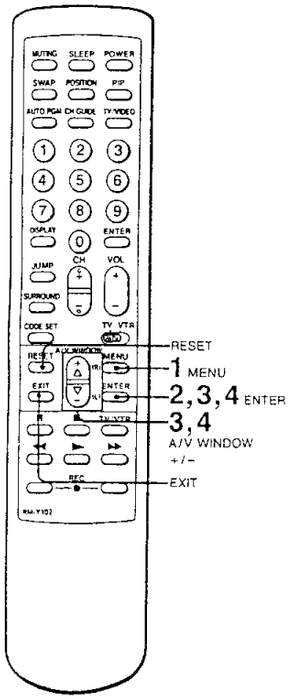
The display will disappear automatically after 3 seconds.

To turn off the TV

Press POWER on the TV or the Remote Commander again.

1-5. ADJUSTING PICTURE AND SOUND QUALITY

Adjusting the Picture



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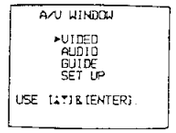
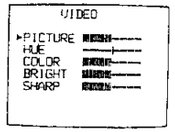
1 Press MENU to display the following screen.
VIDEO is already selected for you.

MENU

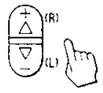


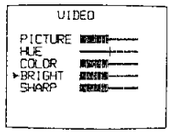
2 Press ENTER.

ENTER



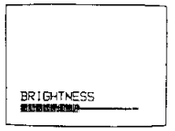
3 Press the +/– button to select the quality you want to adjust.
For example, to adjust the picture brightness, select BRIGHT.





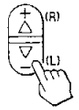
Press ENTER.

ENTER



4 Press the +/– button to make the adjustment.

Brighter



Darker

Press ENTER.
The new setting will appear in the VIDEO menu.

ENTER

To adjust another item
Repeat steps 3 and 4.

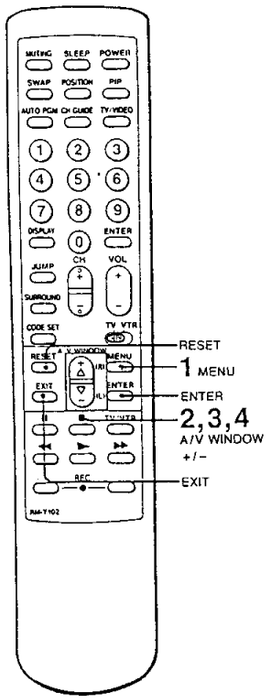
	Press – to:	Press + to:
PICTURE	decrease picture contrast with soft color	increase picture contrast with vivid color
HUE	make skin tones become purplish	make skin tones become greenish
COLOR	decrease color intensity	increase color intensity
BRIGHTNESS	darken the picture	brighten the picture
SHARPNESS	soften the picture	sharpen the picture

The menus and adjustment bars will disappear automatically after 10 seconds if you do not press any other buttons during that time.

To return to TV mode
Press EXIT.

To restore the factory (mid-level) setting
Go to the VIDEO menu and press RESET. All the settings except for PICTURE will be restored to the mid-level setting.

Adjusting the Sound



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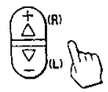
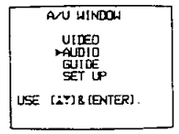
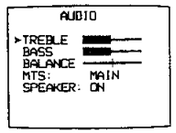
1 Press MENU to display the following screen.

2 Press the +/– button to select AUDIO.

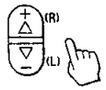


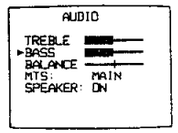


Press ENTER.

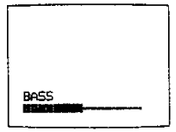


3 Press the +/– button to select the sound quality (TREBLE, BASS or BALANCE) that you want to adjust. For example, to adjust the bass response, select BASS.

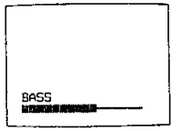




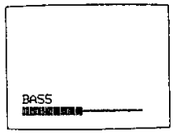
Press ENTER.



4 Press the +/– button to make the adjustment.

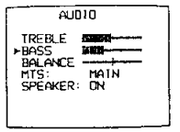


To increase bass response



To decrease bass response

Press ENTER.
The new setting will appear in the AUDIO menu.



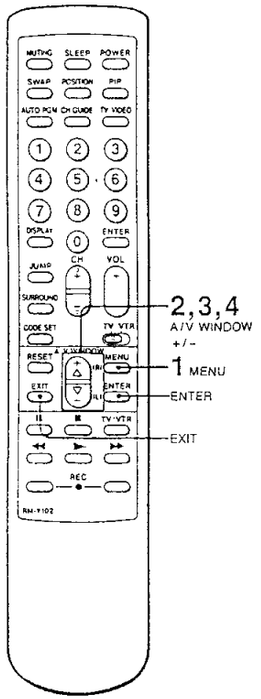
To adjust another item
Repeat steps 3 and 4.

	Press – to:	Press + to:
TREBLE	decrease the treble response	increase the treble response
BASS	decrease the bass response	increase the bass response
BALANCE	emphasize the left speaker's volume	emphasize the right speaker's volume

The menus and adjustment bars will disappear automatically after 10 seconds if you do not press any buttons during that time.

To restore the factory (mid-level) settings
Go to the AUDIO menu and press RESET.
The settings for MTS and SPEAKER will not be affected (p. 12)

To return to TV Mode
Press EXIT.



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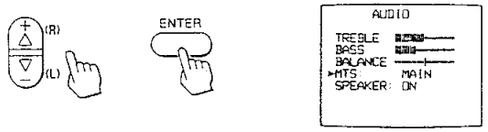
Receiving a Multichannel TV Sound program — MTS

1-2 (FOLLOW STEPS 1 AND 2 ON PAGE 22)

3 Press the +/– button and ENTER to select MTS.



4 Press the +/– button to select MAIN, SAP or MONO modes alternately. *(Display is red)*

Select the MAIN mode to listen to STEREO sound.
The STEREO indicator lamp on the TV will light up whenever a stereo broadcast is received.

Select the SAP mode to listen to Second Audio Programs.

Note
During SAP mode, the sound of non-SAP programs will be muted.

Select the MONO mode to eliminate excessive noise during stereo broadcasts, caused by a weak incoming signal.

Press ENTER.
The display will turn green, indicating that the mode has been set.

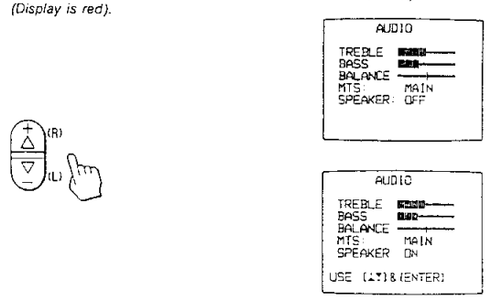
Turning the SPEAKER ON or OFF

Use this feature to turn the TV speakers off when you connect an audio system

1-2 (FOLLOW STEPS 1 and 2 ON PAGE 11)

3 Press the +/– button and ENTER to select SPEAKER.

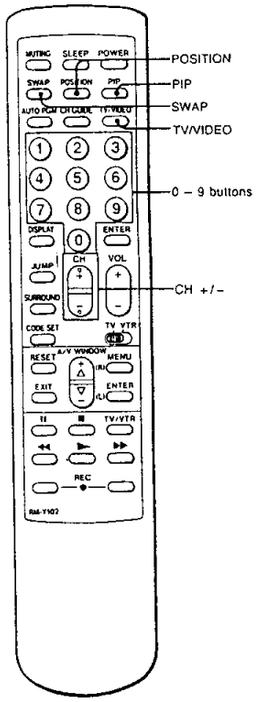
4 Press the +/– button to select ON or OFF modes alternately. *(Display is red).*



Press ENTER.
Display will turn green, indicating that the mode has been set.

To return to TV mode
Press EXIT.

1-6. USING PICTURE-IN-PICTURE (KV-32TS35 ONLY)



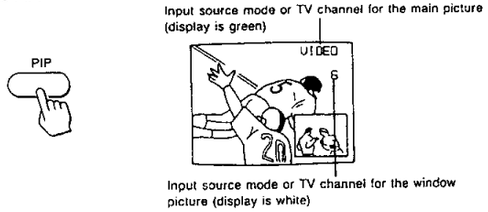
With this feature, you can watch both the main picture and a video source, simultaneously, by means of a window picture.

For example, use Picture-in-Picture when you want to watch a TV program and a video source from connected equipment (VCR, video disc player, etc.) at the same time.

If you connect a VCR, you can watch two different TV programs at the same time.

Displaying a window picture — PIP

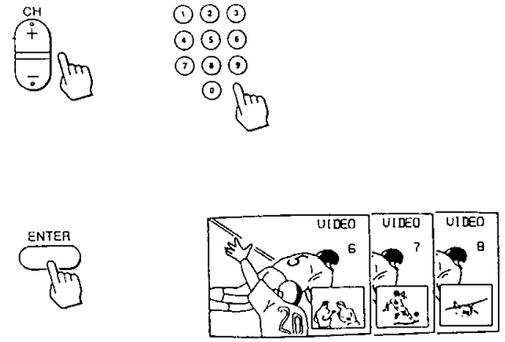
Press PIP.


Input source mode or TV channel for the main picture (display is green)
PIP
VIDEO
6
Input source mode or TV channel for the window picture (display is white)

A window picture will appear in the same input mode as the last time you used PIP.

Scanning channels in the window picture

Press CH +/– or the 0 – 9 buttons and ENTER.



To make the window picture disappear
Press PIP again.

Swapping the main and window pictures — SWAP

1 Press PIP to display a window picture.

2 Press SWAP.

Changing the position of the window picture — POSITION

1 Press PIP to display a window picture.

2 Press POSITION.
Each time you press POSITION, the window picture will move counterclockwise on the screen, as illustrated below.

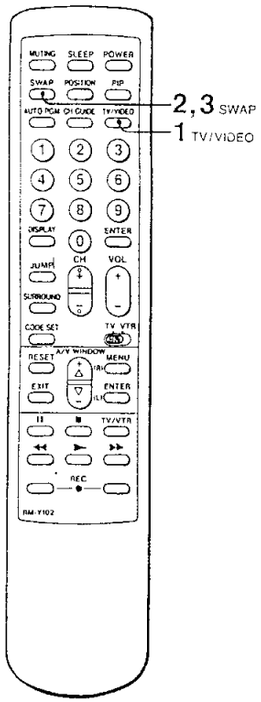
To change the input mode of the window picture

1 Press TV/VIDEO to change the input mode of the main picture.
(Selects TV, VIDEO, S VIDEO in sequence)

2 Press SWAP to swap the main picture with the window picture.

Notes

- You cannot hear the sound of the window picture channel.
- If the main picture is blocked, the display "BLOCKED" will appear on the main screen, and Picture-in-Picture will not function (pp. 17 - 18) - Setting CHANNEL BLOCK).
- If the main picture is not receiving an image, the window picture will disappear. It will reappear when you switch to a receiving channel.
- When the main picture is black and white, depending on the TV signal some window picture images may also be black and white.
- When you turn PIP on, or when you turn the TV on with PIP mode on, the window picture will appear at the bottom right of the screen.
- Depending on the condition of the main picture's signal, the window picture may be affected.



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Displaying a VIDEO input image as a window picture

To watch VIDEO images (VCR playback or TV through a VCR tuner) using Picture-in-Picture, first select a program mode (cable or VHF/UHF) by following the steps on p. 7 "Turning the Cable Connection On or Off." Then follow the steps below.

1 Press TV/VIDEO to select the appropriate video input mode. (Selects TV, VIDEO and S VIDEO modes in sequence)

The video image from the input mode you select will appear as the main picture.

2 Press SWAP so that the video input picture becomes a window picture.

3 Press SWAP again to change the video input picture back to the main picture.

You can only change VIDEO input modes of the main picture.

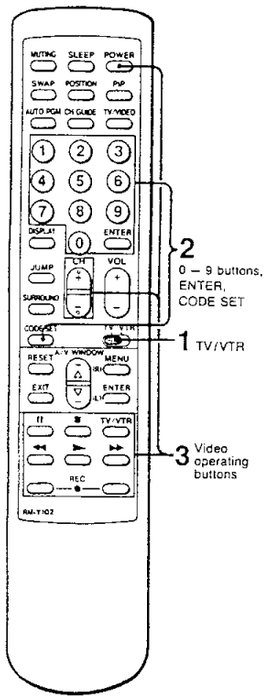
Note

To operate your VCR with the supplied Remote Commander, see pp. 14 - 15 — "Using the Remote Commander."

1-7. USING THE PRE-PROGRAMMED REMOTE COMMANDER

You can operate other video equipment that has an infrared remote detector with this supplied Pre-Programmed Remote Commander (except for KV-32TS20).

Operating Sony or non-Sony Video Equipment — Pre-Programmed Function



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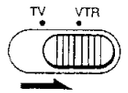
With the supplied Remote Commander, you can operate a Sony video cassette recorder (Beta, 8mm, VHS) or multi disc player as well as most non-Sony video equipment connected to your TV by following the steps below.

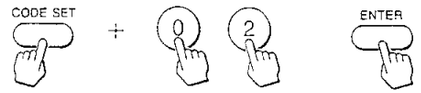
1 Set the TV/VTR selector to VTR.



Note

When the selector is set to VTR, the POWER and CH +/– buttons on the Remote Commander function as video operating buttons and cannot be used to operate the TV.

2 While pressing CODE SET, press the 0 – 9 buttons to enter the manufacturer's code number (see chart on p. 15). For example, to operate a Sony 8 mm VCR, press 0, 2 and ENTER.



3 Use the video operating buttons on the Remote Commander to operate the video equipment.

Operating a VCR

To turn on or off	Press POWER
To change channels (when watching TV programs through the VCR's tuner)	Press CH +/–
To record	Press ● (2 buttons simultaneously).
To play	Press ►.
To stop	Press ■.
To fast forward	Press ►►.
To rewind the tape	Press ◄◄.
To pause	Press ❚❚.
To search the picture forward and backward	Press ►► or ◄◄ during playback.

Operating a Video Disc Player

To play	Press ►.
To stop	Press ■.
To pause	Press ❚❚. *To resume normal playback, press again.* • This function is effective only for CAV (standard-play disc). With CLV (extended-play disc), the TV will go into the standby mode if ❚❚ is pressed.
To search the picture forward and backward	Keep pressing ►► or ◄◄ during playback. *To resume normal playback, release the button.*

Manufacturers and Code Numbers (VCR)

Manufacturer	Code number
SONY	01, 02, 03, 04
CANON	05
EMERSON	22, 30, 33
FISHER	10, 11, 12, 15
FUNAI	29
GENERAL ELECTRIC	05, 08
GOLDSTAR	25
HITACHI	07, 08
JVC	16
MAGNAVOX	05, 06, 09
MITSUBISHI	18, 19, 26, 27
MULTITECH	29
NEC	16, 23, 31
PANASONIC	05, 06
PHILCO	05, 06
PHILIPS	05, 06, 09
QUASAR	05, 06
RCA	07, 08
SAMSUNG	24, 32
SANYO	11, 15
SCOTT	21
SHARP	13, 14
SHINTOM	34
SYLVANIA	05, 06, 09
SYMPHONIC	29
TEKNIKA	28, 29
TOSHIBA	20, 21
TOTE VISION	25
ZENITH	17

The code numbers for Sony equipment are assigned as follows:

01 .... Beta, ED Beta VCR
02 .... 8mm VCR
03 .... VHS VCR
04 .... Video disc player

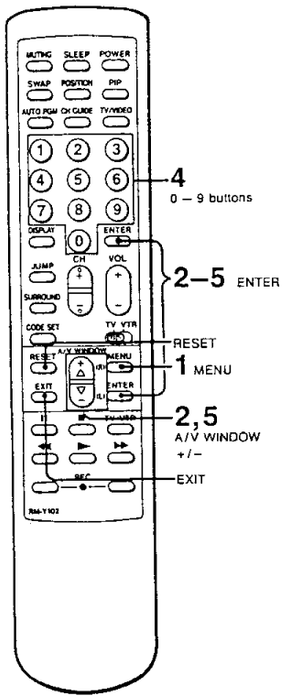
For your convenience
Write the manufacturer name and code number for your equipment onto one of the supplied self-adhesive labels and affix to the Remote Commander for easy reference.

	BRAND	CODE
1		
2		
3		

Notes

- If more than one code number is listed for manufacturers other than Sony, try entering them one by one, until you come to the correct code for your equipment.
- If the video equipment does not have a certain function, the corresponding button on this Remote Commander will not operate.

CAUTION
When you remove the batteries from the Remote Commander, all the settings will revert to the Sony Beta setting. Reset the codes by following the steps on p.14.



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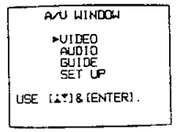
1-8. SETTING THE CURRENT TIME

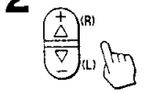
Set the current time before using the Timer-activated functions from the GUIDE menu (pp. 16 - 19).

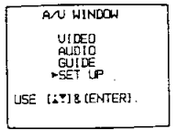
1 Press MENU to display the following screen.

MENU



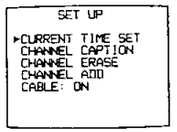
2 Press the + / – button to select SET UP.





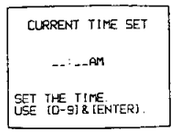
Press ENTER.
CURRENT TIME SET is already selected for you.

ENTER

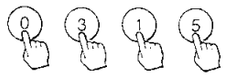


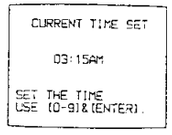
3 Press ENTER.

ENTER

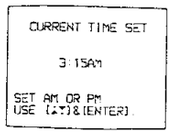


4 Press the 0 – 9 buttons and ENTER to enter the current time. For example, to set the time at 3:15, press 0, 3, 1, 5. (You must press 4 digits.)

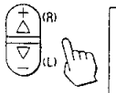


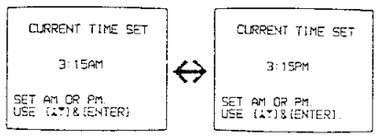


Press ENTER.

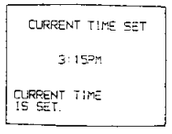


5 Press the +/– button, to select AM or PM alternately.





Press ENTER.



To clear the time setting
Press RESET.

To reset the time
Press RESET while in the CURRENT TIME screen, and repeat steps 4 and 5.

To display the time
Set TIMER DISPLAY ON/OFF (pp. 18 - 19).

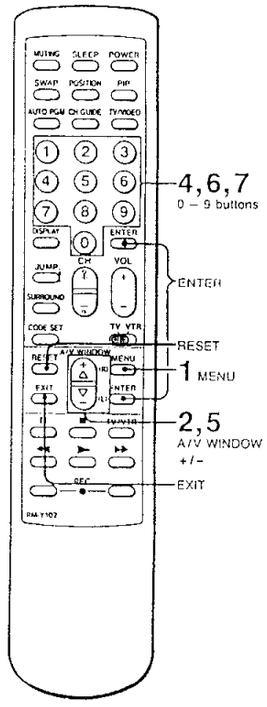
To return to TV mode
Press EXIT.

Notes

- The internal clock of this TV operates on a 12-hour cycle. If a 24-hour cycle number (for instance, 13:00) is entered, it will be cleared when you press ENTER.

  12:00 AM stands for midnight.
  12:00 PM stands for noon.

- All the settings including TIME SET will be erased if you unplug the TV, or if a power failure occurs. Reset the current time by following steps 1 – 5.



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1-9. USING THE TIMER-ACTIVATED FUNCTIONS-GUIDE

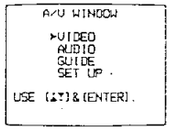
Using the GUIDE feature, you can call up an on-screen menu giving instructions on how to use the timer-activated functions: ON/OFF TIMER, CHANNEL BLOCK, AND TIME DISPLAY ON/OFF.

Setting the ON/OFF TIMER

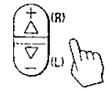
With this function you can set your favorite program to appear on the screen at the time that you set.

EXAMPLE: Set the timer to turn on the TV to channel 21 at 3:15 PM, for 2 hours.

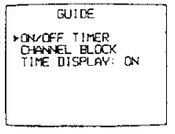
1 Press MENU to display the following screen.



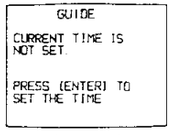
2 Press the +/– button to select GUIDE.



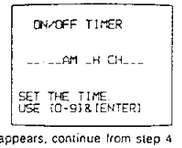
Press ENTER.
ON/OFF TIMER is already selected for you.



3 Press ENTER.

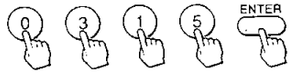


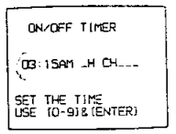
If this screen appears, follow steps 3 – 5 on pp. 15 - 16. Then begin again from step 1 on this page.



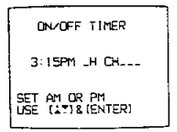
If this screen appears, continue from step 4 on the next page.

4 Set the time that you want the TIMER to start by pressing 0 — 9 (you must press 4 digits) and ENTER.

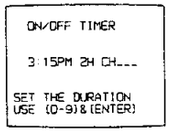




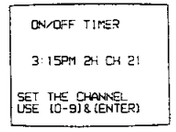
5 Select AM or PM by pressing the +/– buttons, and press ENTER.



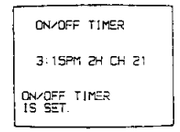
6 Set the duration of time that you want the TV to remain on, by pressing 1 — 9 and ENTER.



7 Set the channel that you want the TV to turn on to, by pressing 0 — 9 and ENTER.



The following screen will appear, showing that the TIMER has been set.

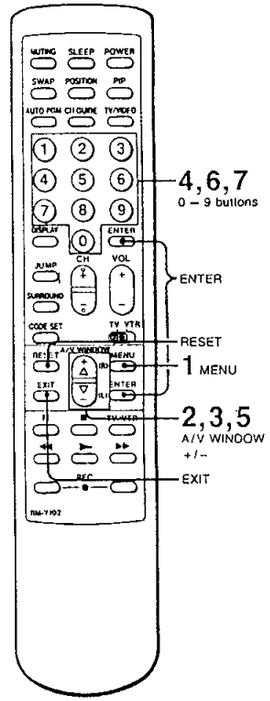


To clear the ON/OFF TIMER setting
Press RESET.

To return to TV mode
Press EXIT.

Notes

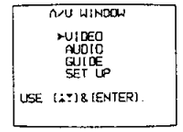
- While the TIMER is set, the TIMER indicator lamp on the TV will be lit.
- One minute before the timer goes off, the "TV WILL TURN OFF" display will appear on the screen.
- If you have not set the clock correctly, the ON/OFF TIMER will not operate. See p. 15 (TIME SET) to set the clock.
- The TIMER setting will be erased if you unplug the TV, or if a power failure occurs. Repeat steps 1 — 7 to reset the TIMER.



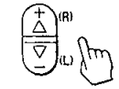
Setting CHANNEL BLOCK

Use this function to block a channel from appearing on the screen during the preset time, for instance, to prevent children from watching undesirable programs.
EXAMPLE: Set CHANNEL BLOCK at 8:45 PM, for one hour, on channel 38.

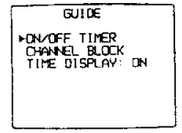
1 Press MENU to display the following screen.



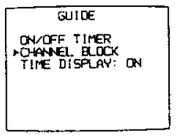
2 Press the +/– button to select GUIDE.



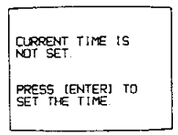
Press ENTER.



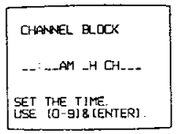
3 Press the +/– buttons to select CHANNEL BLOCK.



Press ENTER.

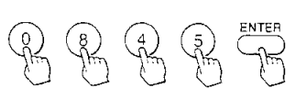


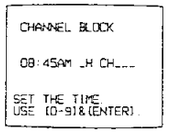
If this screen appears, follow steps 3 - 5 on pp. 15 - 16. The begin again from step 1 on this page.



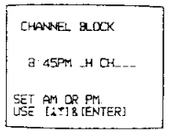
If this screen appears, proceed to step 4 on the next page.

4 Set the time that you want CHANNEL BLOCK to start by pressing 0 – 9 (you must press 4 digit) and ENTER.

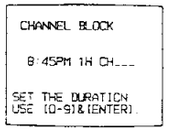




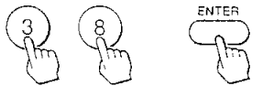
5 Select AM or PM by pressing the +/– button, and press ENTER.

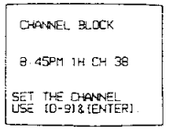


6 Set the duration of time that you want the TV to remain blocked (up to 9 hours), by pressing 1 – 9 and ENTER.

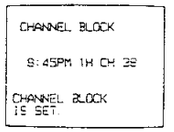


7 Set the channel that you want to block, by pressing 0 – 9 and ENTER.





The following screen will appear, showing that CHANNEL BLOCK has been set.



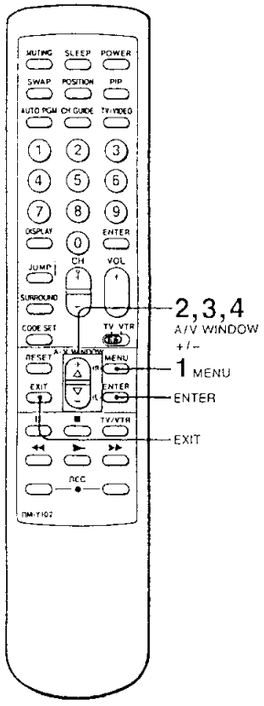
If you select a channel which has been blocked, the BLOCKED screen will appear.

To clear the BLOCK setting
Press RESET.

To return to TV mode
Press EXIT.

Notes

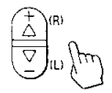
- If you set a new CHANNEL BLOCK by following steps 1 – 7, the original setting will be erased.
- If you have not set the clock correctly, CHANNEL BLOCK will not operate. See p. 15 (TIME SET) to set the clock.



Setting the TIME DISPLAY

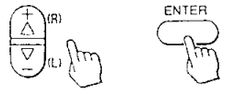
1 Press MENU to display the following screen.

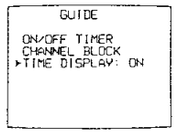
2 Press the +/– button to select GUIDE.



Press ENTER.

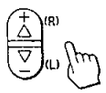
3 Press the +/– button and ENTER to select TIME DISPLAY.

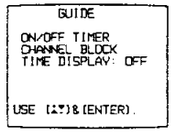


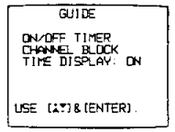


1-10. USING CHANNEL CAPTION

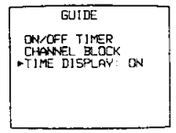
4 Press the +/– button to select ON or OFF alternately.
(Display is red)







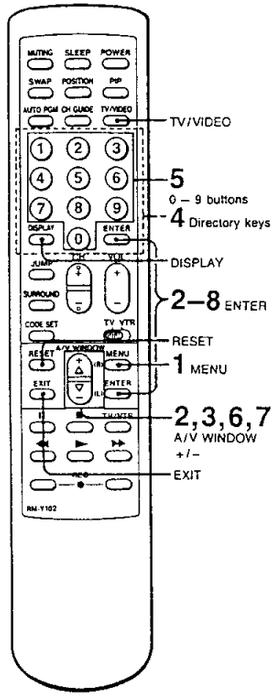
Press ENTER.
The display will turn green, showing that the mode has been set.



To return to TV mode
Press EXIT.

Notes

- When TIME DISPLAY is set to ON, the time will remain on the screen.
- The menu screens will be cancelled automatically after 10 seconds if you do not push any buttons during that time.



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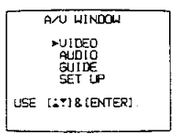
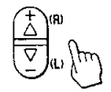
Captioning the channel display — CHANNEL CAPTION

Use this feature to caption up to 12 channel number displays with the matching channel call letters. For example, caption channel 20 with ESPN.

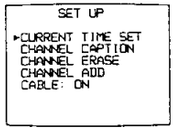
1 Press MENU to display the following screen.



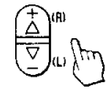
2 Press the +/– button to select SET UP.

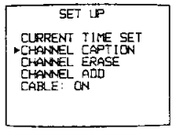


Press ENTER.



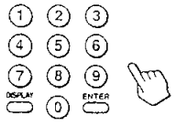
3 Press the +/– button to select CHANNEL CAPTION.

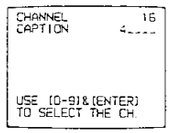




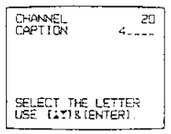
Press ENTER.

4 Enter a directry (CHANNEL GUIDE - see p. 20) number for the caption by pressing one of the directory keys. For example, to set caption number 4, press 4.

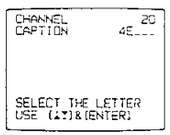




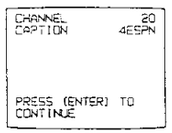
5 Select the channel you want to caption by pressing 0 — 9 and ENTER.



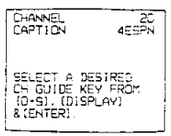
6 Select the first letter by pressing the + / – button and ENTER.
Press + to advance alphabetically; press – to go back.



7 Select each remaining letter by repeating step 6.
(For a 3-letter caption, leave a space by pressing ENTER only.)



8 To set the next caption, press ENTER again, and repeat the steps from step 4.

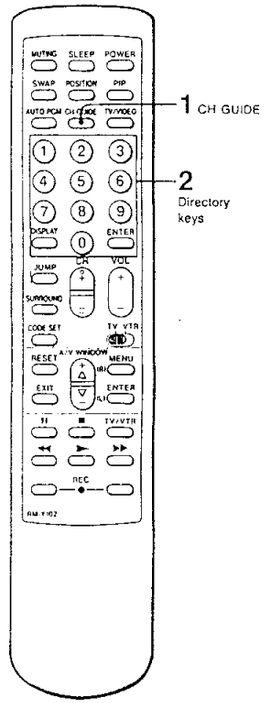


To erase unneeded captions
Call the caption setting screen by following steps 1 – 4, and press RESET.

To return to TV mode
Press EXIT.

Notes

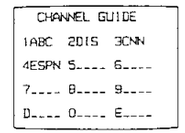
- You cannot use CHANNEL CAPTION while the TV is in VIDEO or S VIDEO mode. Before setting captions, select TV mode by pressing TV/VIDEO.



Viewing the captions you have set — CHANNEL GUIDE

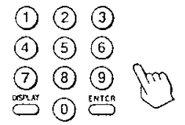
Use this feature to display the captions you have set, and to select a channel directly for viewing.

1 Press CH GUIDE.
A directory appears, corresponding to the directory keys on the Remote Commander.

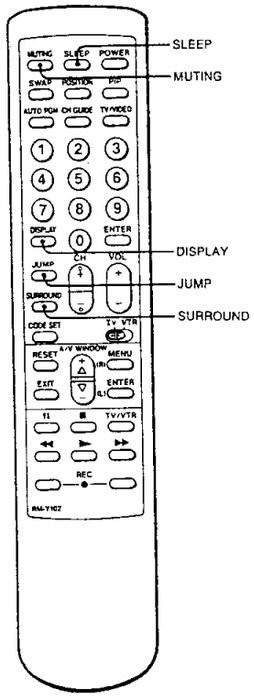


To cancel the CHANNEL GUIDE screen
Press CH GUIDE again.

2 Press the directory key of the channel you want to watch.



1-11. ENNOYING OTHER USEFUL FEATURES



Muting the sound — MUTING

Press MUTING.
The display "MUTING" will appear on the screen.

To restore the sound
Press MUTING again, or press VOL + .

Keeping the channel displayed — DISPLAY

To display the channel
Press DISPLAY.

All the current displays will appear for 3 seconds, then disappear. The channel display will remain on the screen.

To cancel the display
Press DISPLAY again.

The channel display will disappear.

Listening to surround sound — SURROUND

Gives sound reproduction with the atmosphere of a movie theater or a concert hall.

To set
Press SURROUND.
The display ⇨ will appear on the screen for a few seconds.

To cancel
Press SURROUND again.
The display ⇨ will appear for a few seconds.

Using the sleep timer — SLEEP

Turns TV off automatically about 1 hour after setting.
Press SLEEP.

A green "SLEEP ON" display appears for a few seconds.
(A red "SLEEP" display will appear 1 minute before the TV shuts off.)

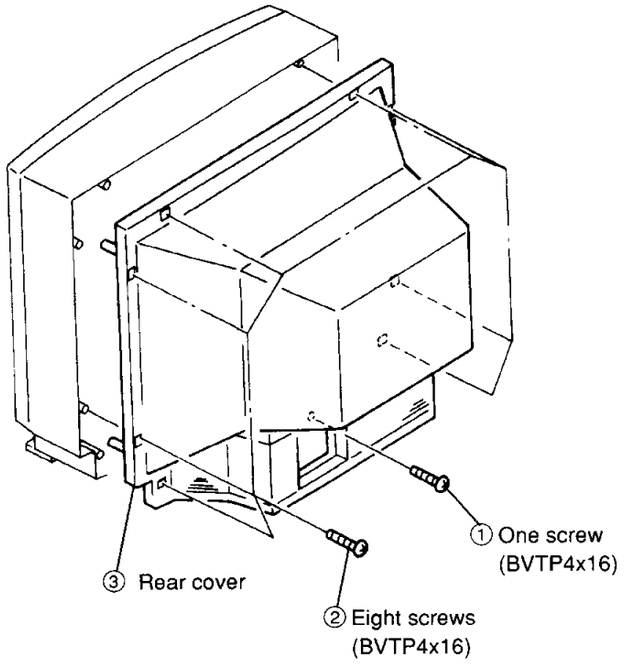
To cancel the setting
Press SLEEP again.
A green "SLEEP OFF" display appears for a few seconds.
OR
Turn the TV off.
The sleep timer setting will be cancelled.

Switching quickly between 2 channels — JUMP

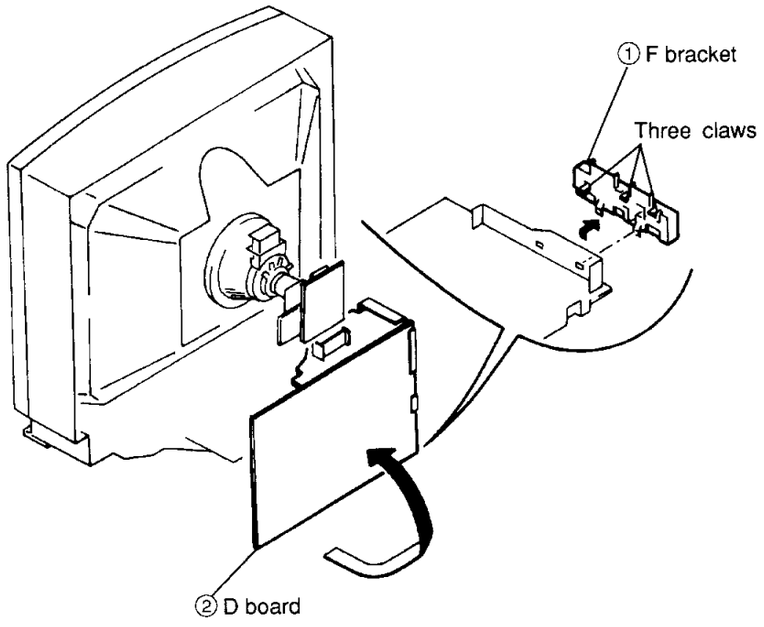
Press JUMP once to recall the channel you were watching previously; press JUMP again to switch back. Use this feature to keep track of two programs alternately.

SECTION 2
DISASSEMBLY

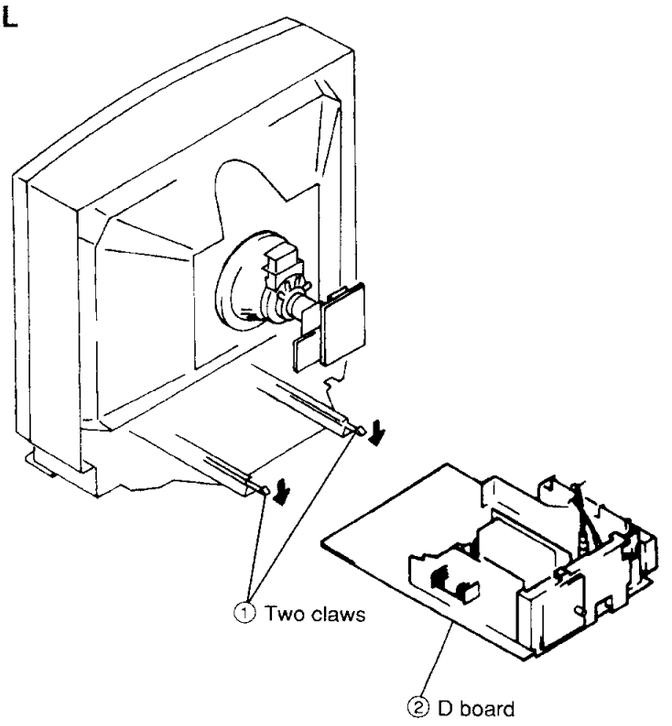
2-1. REAR COVER REMOVAL



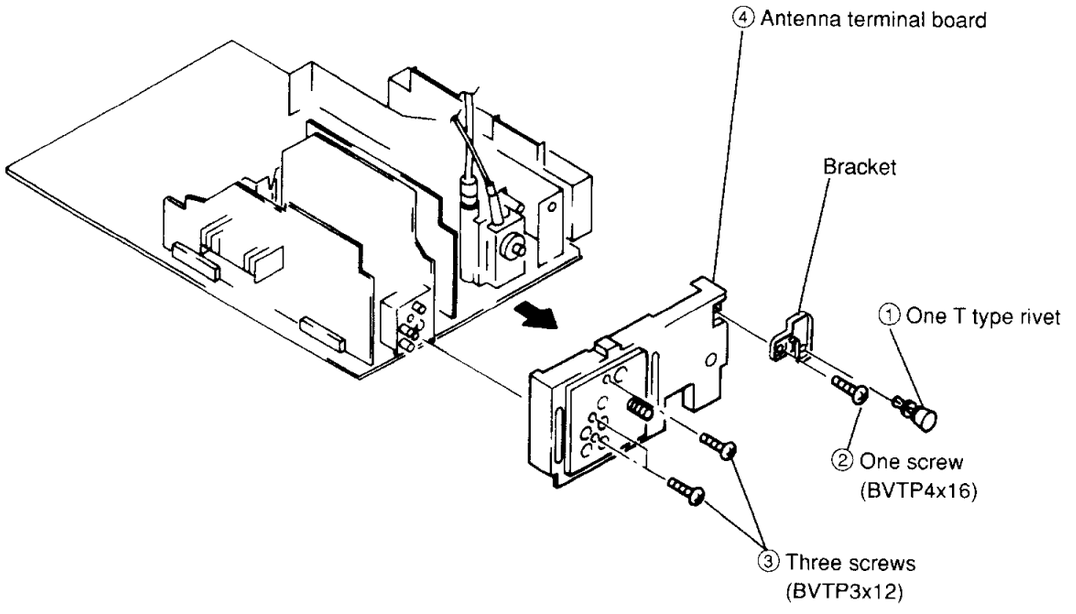
2-2. SERVICE POSITION



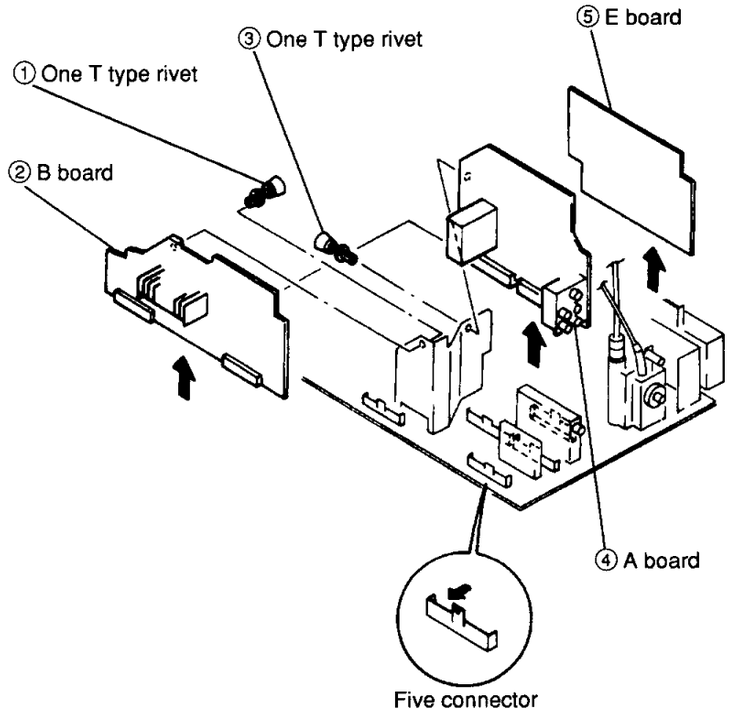
2-3. D BOARD REMOVAL



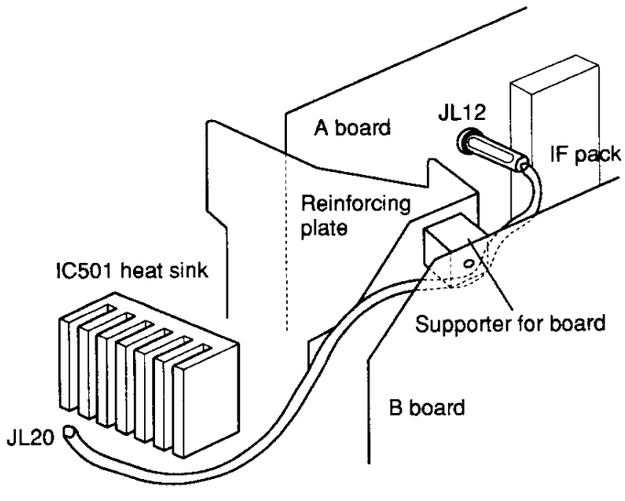
2-4. ANTENNA TERMINAL BOARD REMOVAL



2-5. B, A AND E BOARDS REMOVAL

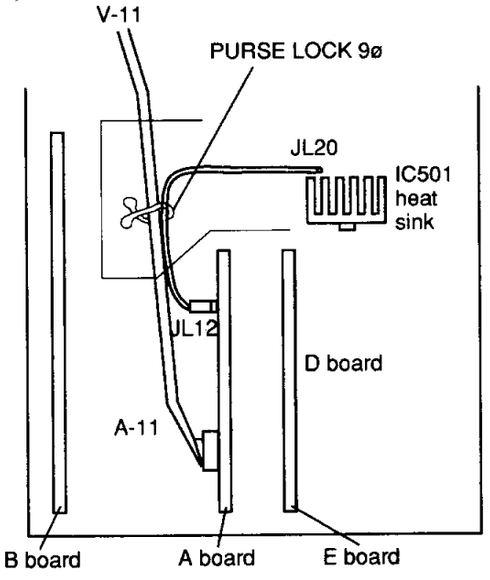


2-6. HOW TO IMPROVE INTERLACE



(KV-32TS20 only)

Fastening Jumper Connector Wire between JL12 (A boerd) and JL20 (D board)

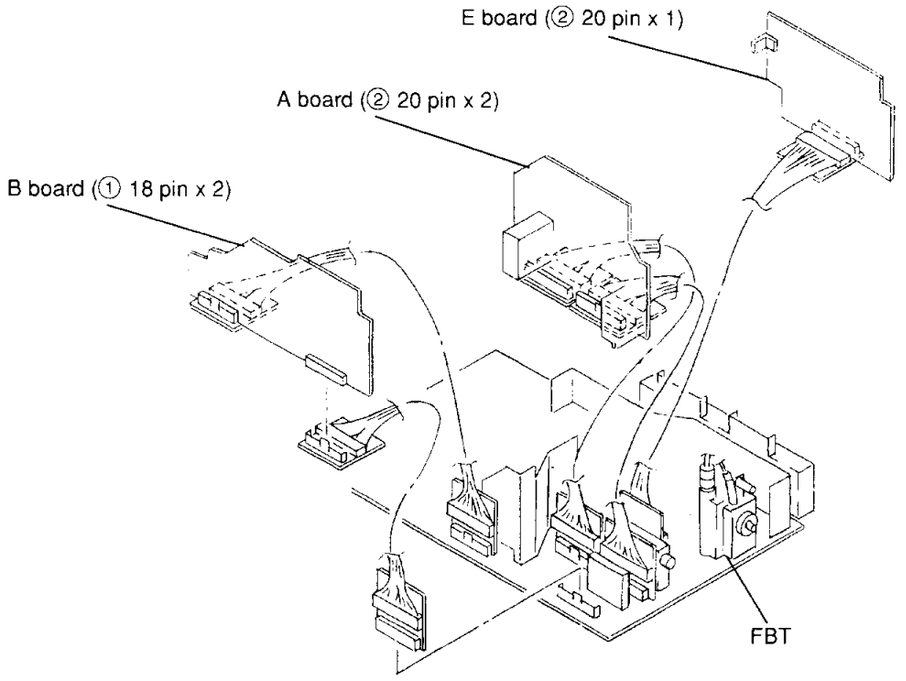


(KV-32TS35 only)

Fasten the wire to eliminate slack between JL20 and JL12 with a purse lock.

2-7. B, A AND E BOARDS SERVICE POSITION

※ Keep the extended boards further away from FBT to prevent interference.



EXTENSION CABLES FOR A, B AND E BOARD

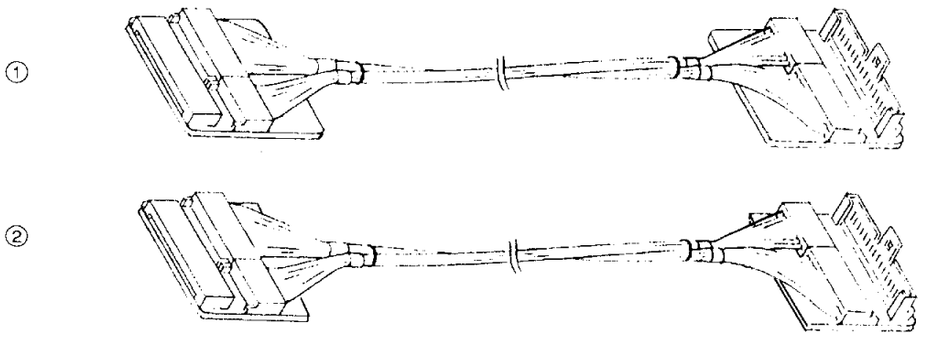
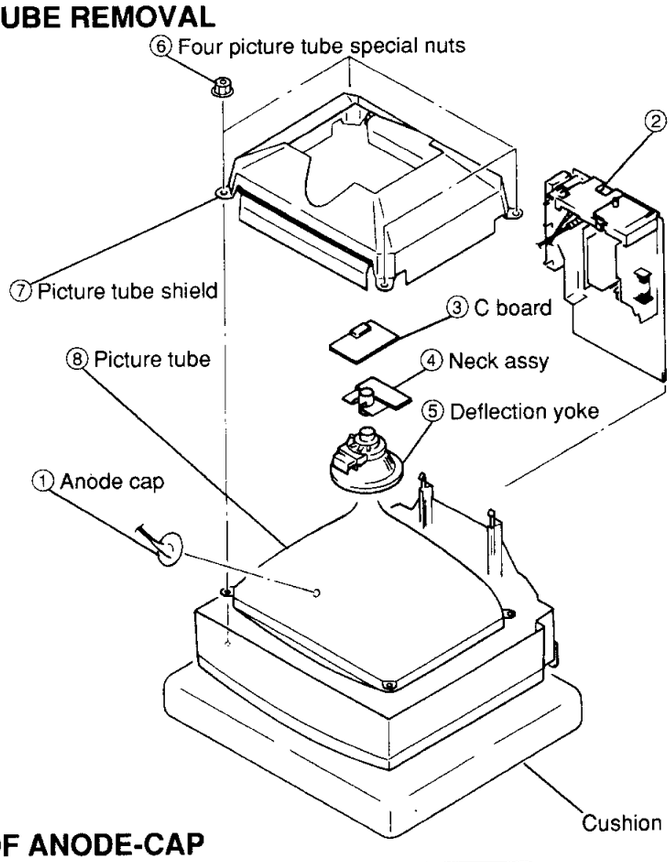


FIG	DISCLIPTION	QTY	USE FOR	PART NO
①	18 PIN-18 PIN (H1, H2)	2	B BOARD	3-702-541-01
②	20 PIN-20 PIN (H3, H4)	2	A BOARD	3-702-542-01
		1	E BOARD	

2-8. PICTURE TUBE REMOVAL

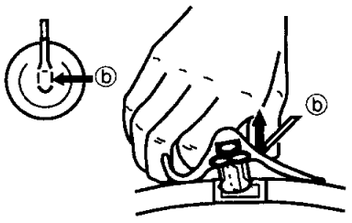


• REMOVAL OF ANODE-CAP

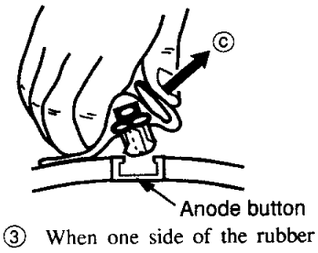
Note
Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield, or carbon painted on the CRT, after removing the anode.

• REMOVING PROCEDURES

① Turn up one side of the rubber cap in the direction indicated by the arrow ⓐ.



② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⓑ.



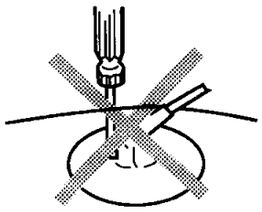
③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ⓒ.

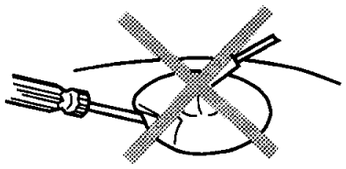
• HOW TO HANDLE AN ANODE-CAP

① Don't hurt the surface of anode-caps with sharp shaped material!

② Don't press the rubber hardly not to hurt inside of anode-caps!
A metal fitting called as shatter-hook terminal is built in the rubber.

③ Don't turn the foot of rubber over hardly!





SECTION 3
SET-UP ADJUSTMENTS

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.
- These adjustments should be performed with rated power supply voltage unless otherwise noted.

Controls and switch should be set as follows unless otherwise noted:

PICTURE control ..... RESET
BRIGHTNESS control ..... RESET

- Perform the adjustments in order as follows:

1. Beam Landing
2. Convergence
3. Focus
4. White Balance

Note: Test Equipment Required.
1. Color-bar/Pattern Generator
2. Degausser
3. Oscilloscope

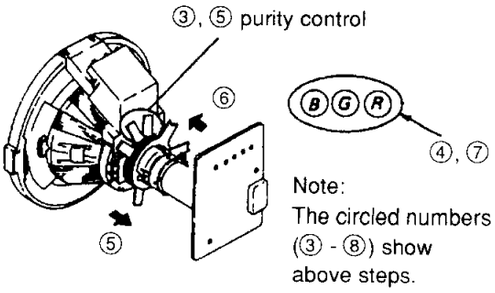
3-1. BEAM LANDING

Preparation:
- Feed in the white pattern.
- Before starting, degauss the entire screen.

1. Turn on set power supply and receive an all-white signal.
2. Evenly degauss the entire screen.
3. Loosen the deflection yoke mounting screw, and set the purity control to the center as shown in Figure 3-1.
4. Set BKG VR Ⓡ to maximum and set Ⓑ and Ⓖ to minimum.
5. Move the deflection yoke back, and adjust the purity control so that Ⓡ is in the center and Ⓖ and Ⓑ are at the sides, evenly. (Figure 3-2.)
6. Move the deflection yoke forward so that the entire screen is red.

* If the deflection yoke is pushed all the way to the CRT then moved slightly back, landing adjustment is easier.

7. Substitute Ⓖ, then Ⓑ for Ⓡ in step 4 and check landing.
8. Rotate Ⓡ, Ⓖ and Ⓑ once each and check landing.
9. When landing is not right, adjust the purity control and use magnets as shown in Figure 3-3. then repeat steps 7 and 8.
10. When a magnet is used, be sure to perform step 2, and tighten deflection yoke mounting screw loosely.



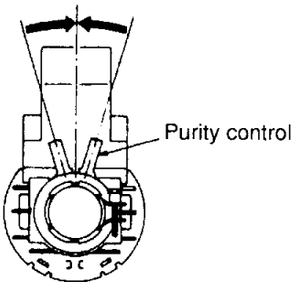


Fig. 3-1.

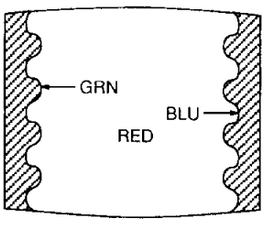


Fig. 3-2.

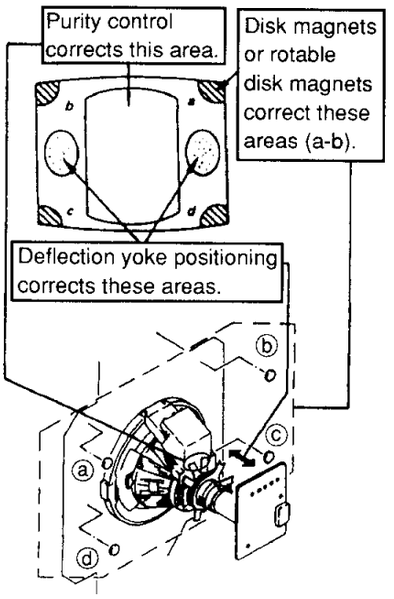


Fig. 3-3.

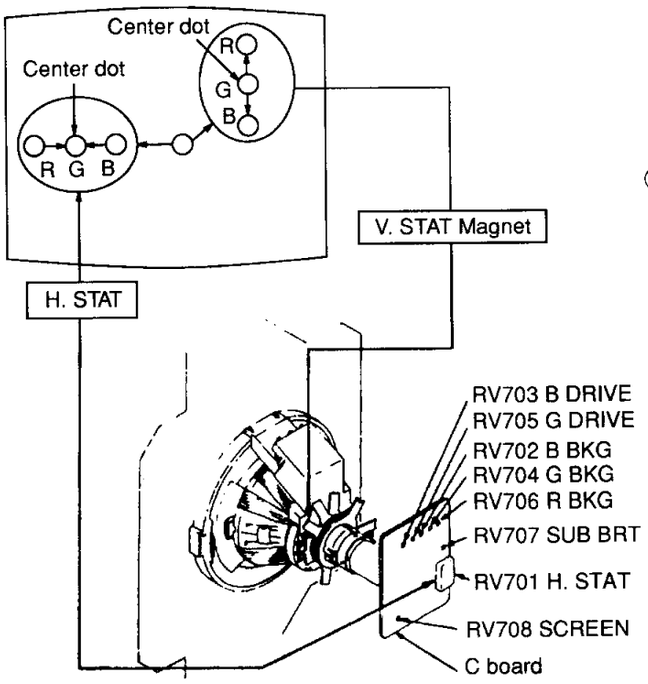
3-2. CONVERGENCE

Preparation:

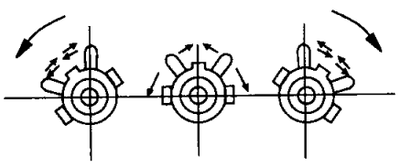
- Before starting, perform FOCUS, H.SIZE, V.SIZE and V.LIN adjustments.
- Set BRIGHTNESS control to fully counterclockwise.
- Feed in the dot pattern.

(1) Horizontal and Vertical Static Convergence

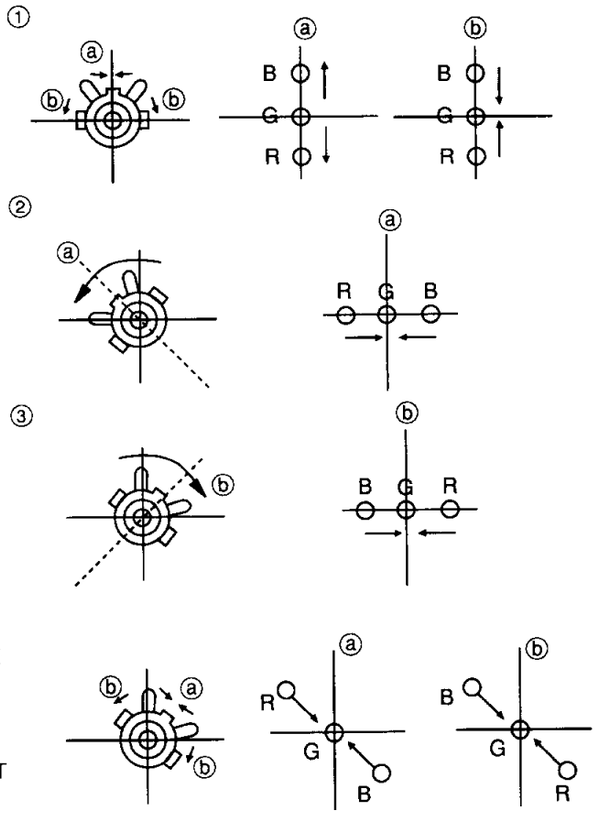
1. Adjust H. STAT VR to coincide red, green and blue dots on the center of screen (Horizontal movement)



2. Adjust V.STAT magnet to coincide red, green and blue dots on the center of screen (Vertical movement)
3. If the red, green and blue dots do not coincide on the center of screen with H.STAT VR, perform horizontal convergence adjustment using H.STAT VR and V.STAT magnet as shown below. (In this case, H.STAT VR and V.STAT magnet effect each other.)
   Tilt the V.STAT magnet and adjust static convergence to open or close the V.STAT magnet.

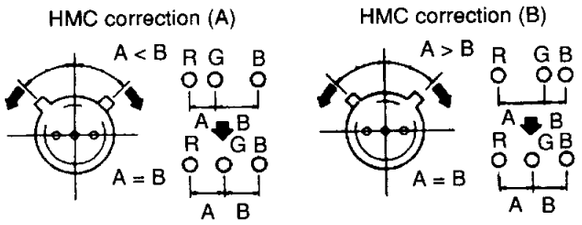


4. When the V.STAT magnet is moved in the direction of arrow ⓐ and ⓑ. Red, Green and Blue dots move as shown below.

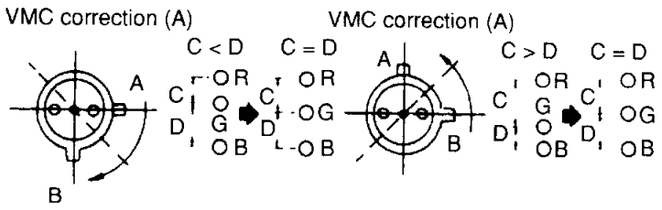


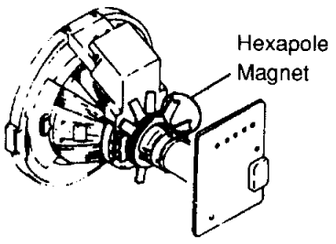
- HMC and VMC correction for Hexapole Magnet.

1. HMC (Horizontal, Mis. convergence) correction and motion of the Electron Beam with the Hexapole Magnet.



2. VMC (Vertical, Mis. convergence) correction and motion of the Electron Beam with the Hexapole Magnet.





(2) Dynamic Convergence Adjustment

Preparation:

- Before starting, perform Horizontal and Vertical Static Convergence Adjustment.

1. Loosen deflection yoke screw.
2. Remove deflection yoke spacers.
3. Move the deflection yoke for best convergence as shown in Fig. 3-4.
4. Tighten the deflection yoke screw.
5. Install the deflection yoke spacers.

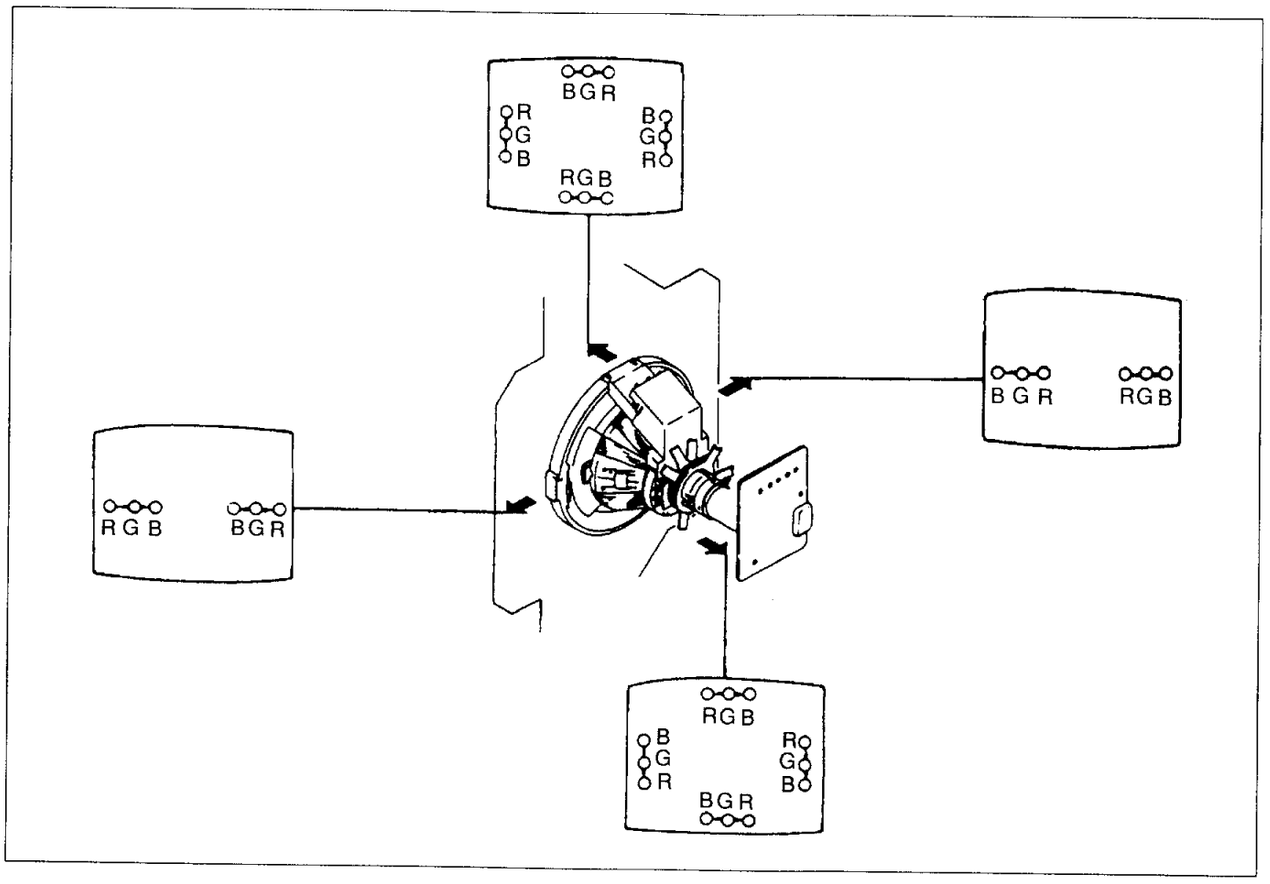
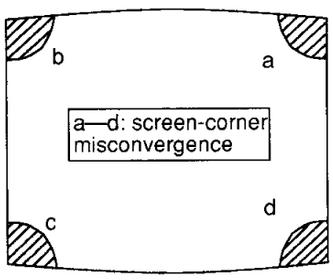
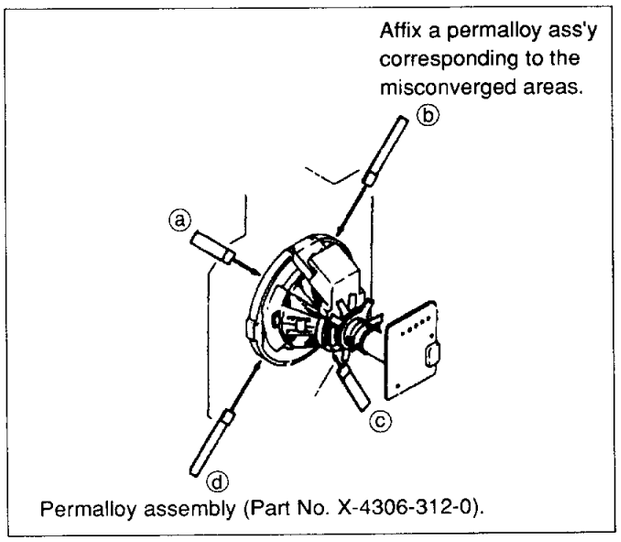


Fig. 3-4.

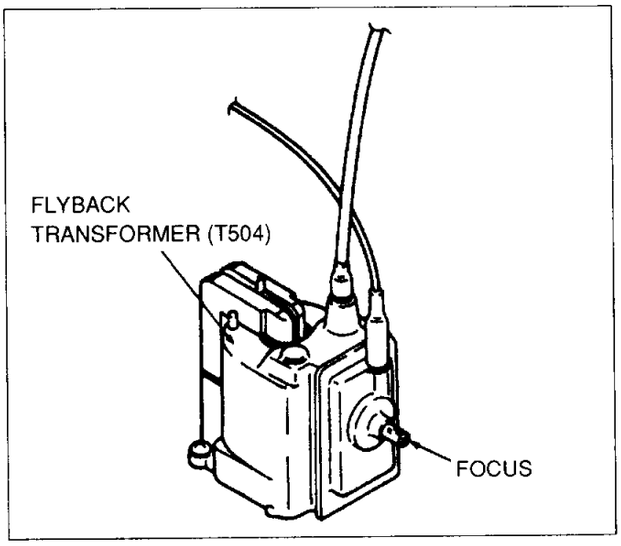
(3) Screen-corner Convergence





3-3. FOCUS ADJUSTMENT

Adjust FOCUS control on the flyback transformer for a best focus.



3-4. WHITE BALANCE

- Input dot signal from pattern generator.
- PICTURE button 80%
  BRIGHTNESS control ..... click position

[SCREEN (G2)]

1. Adjust BKG VRs (RV702, RV704, and RV706) so that voltages on the red, green and blue cathodes are 180V dc with an oscilloscope as shown in Fig. 3-5.

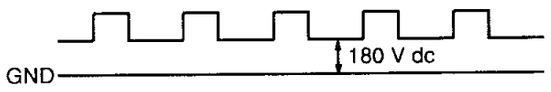


Fig. 3-5.

2. Observe the screen and adjust RV708 (SCREEN) to obtain the faintly visible background of dot signal. Note the color that first becomes visible by turning SCREEN VR.
   Do not turn a BKG control for this color.

[WHITE BALANCE]

1. Input entirely white signal from pattern generator.
2. Set the PICTURE button to obtain the faintly visible raster on the screen.
3. Observe the screen and adjust the other two BKG VRs for best white balance.
4. Set the PICTURE button at maximum.
5. Observe the screen and adjust the DRIVE VRs (RV703, RV705) for best white balance.
6. Repeat steps 2 through 5 several times.

SECTION 4
SAFETY RELATED ADJUSTMENT

⊠ R542, CONFIRMATION METHOD (HOLD-DOWN CONFIRMATION) AND READJUSTMENTS

The following adjustments should always be performed when replacing the following components (marked with ◪ on the schematic diagram). IC601, PM501, Q605, Q606, C536, C639, R537, R542, R546, R620, R621, R629, R630

(1) Preparation before confirmation

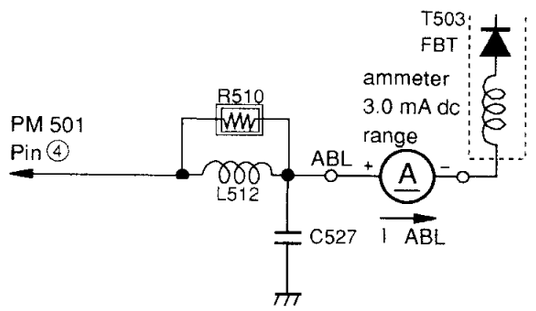
1. Remove R620 on the D board and connect a variable resistor (RV1: about 10kΩ) between pin ① of IC601 and B+ line.
2. Supply 120 ±2.0 V AC to with variable autotransformer.

(2) Hold-down operation confirmation

1. Turn the POWER switch ON, and receive entirely white signals and adjust ABL current to 1650 ±20 µA with PICTURE and BRIGHT etc controls.
2. Increase B +line voltage gradually by adjusting the resistor of RV1. Confirm that the minimum voltage is less than 145.7V DC whereby the raster disappears during operation of hold-down circuit.
   NOTE:
   When the hold-down circuit starts operating, switch OFF the POWER of the set immediately.
3. Turn the POWER switch ON, and receive dot signals and adjust ABL current to 150 ±20 µA with PICTURE and BRIGHT etc controls.
4. Increase B +line voltage gradually by adjusting the resistor of RV1. Confirm that the minimum voltage is less than 148.7V DC whereby the raster disappears during operation of hold-down circuit.
   NOTE:
   When the hold-down circuit starts operating, switch OFF the POWER of the set immediately.

(3) Hold-down readjustment

When step (2) is not satisfied, readjustment should be performed by altering the resistance value of R542 (a component marked with ⊠).



⊠ R543 CONFIRMATION METHOD (HOLD-DOWN CONFIRMATION) AND READJUSTMENTS

The following adjustments should always be performed when replacing the following components (marked with ◪ on the schematic diagram). IC601, Q605, Q606, PM501, D507, C535, C536, C639, R520, R537, R543, R546, R620, R621, R629, R630, T503

(1) Preparation before confirmation

1. Turn the POWER switch ON, and receive entirely white signals and set the PICTURE and BRIGHT controls to maximum.
2. Confirm that voltage of the check terminal of pin ① of D-15 is more than 120.0V DC when the set is operating normally with 120.0 ± 2.0V AC supply.

(2) Hold-down operation confirmation

1. Turn the POWER switch ON, and receive entirely white signals and adjust ABL current to 1650 ±20 µA with PICTURE and BRIGHT etc controls.
2. Apply DC voltage of over 130V DC gradually to the check terminal of pin ① of D-15 via 1T40 from the DC stabilized power source.
   Confirm that the minimum voltage is less than 138.8V DC whereby the raster disappears during operation of hold-down circuit.
   NOTE:
   When the hold-down circuit starts operating, switch OFF the POWER of the set immediatery.
3. Turn the POWER switch ON, and receive dot signals and adjust ABL current to 150 ±20 µA with PICTURE and BRIGHT etc controls.
4. Apply DC voltage of over 130V gradually to the check terminal of pin ① of D-15 via 1T40 from the DC stabilized power source.
   Confirm that the minimum voltage is less than 138.8V DC whereby the raster disappears during operation of hold-down circuit.
   NOTE:
   When the hold-down circuit starts operating, switch OFF the POWER of the set immediatery.

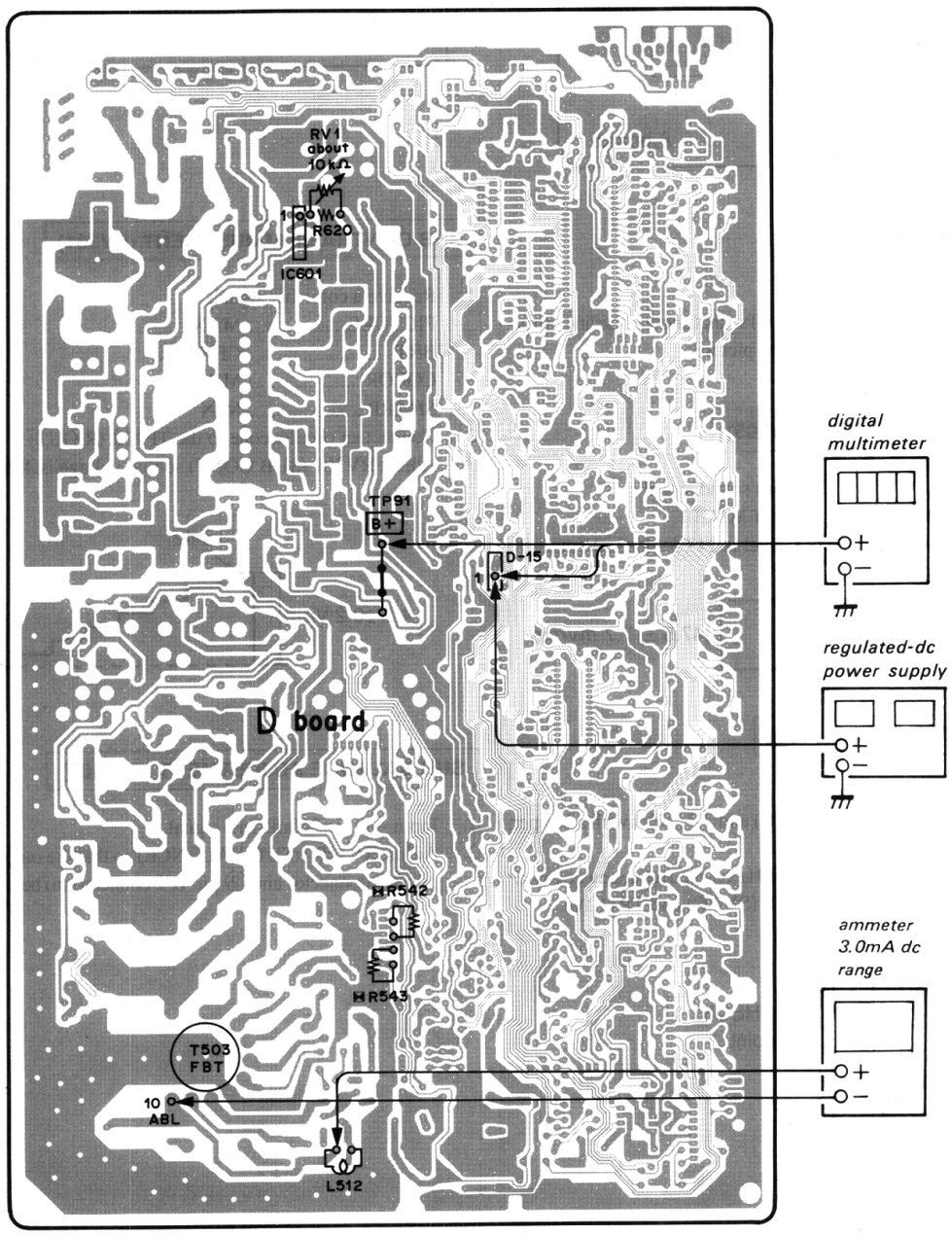
(3) Hold-down readjustment

When step 2 is not satisfied, readjustment should be performed by altering the resistance value of R543 (a component marked with ⊠).

B+ VOLTAGE CONFIRMATION

The following adjustments should always be performed when replacing IC601 and R620.

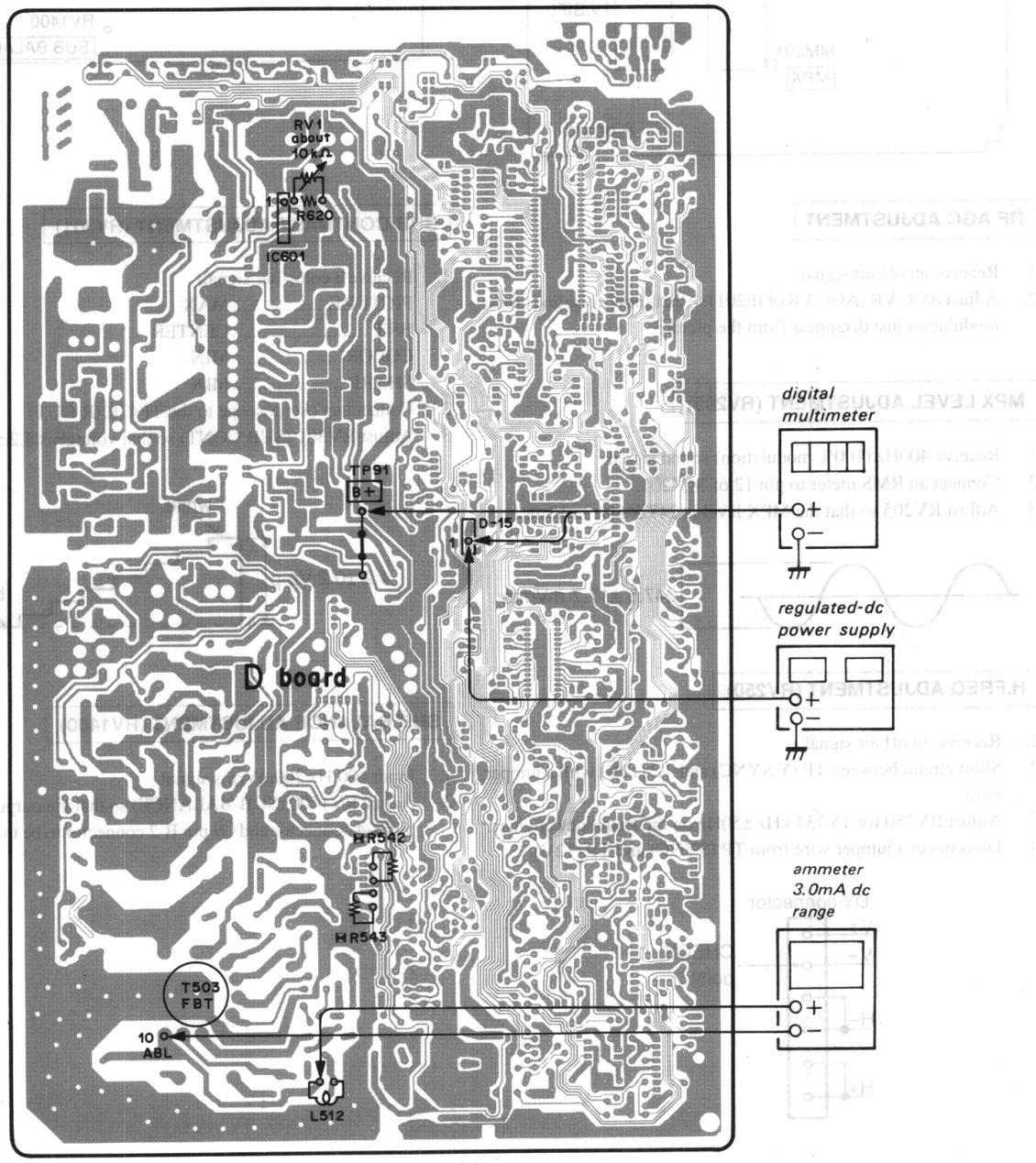
1. Supply $130^{+2.0}_{-0}$ V AC to with variable auto-transformer.
2. Receive entirely monoscope signal.
3. Set the PICTURE control and BRIGHT controls in to initial reset.
4. Confirm the voltage of TP-91 is less than 136.6V DC.
5. If step 4 is not satisfied, replace IC601 and R620 repeat above steps.



B+ VOLTAGE CONFIRMATION

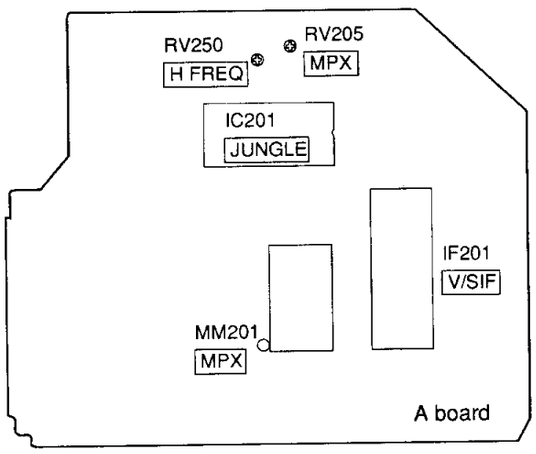
The following adjustments should always be performed when replacing IC601 and R620.

1. Supply $130^{+2.0}_{-0}$ V AC to with variable auto-transformer.
2. Receive entirely monoscope signal.
3. Set the PICTURE control and BRIGHT controls in to initial reset.
4. Confirm the voltage of TP-91 is less than 136.6V DC.
5. If step 4 is not satisfied, replace IC601 and R620 repeat above steps.



SECTION 5
CIRCUIT ADJUSTMENTS

5-1. A BOARD ADJUSTMENTS

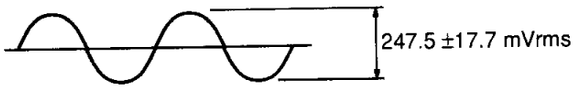


RF AGC ADJUSTMENT

1. Receive an off-air signal.
2. Adjust AGC VR (AGC VR of IF201) so that snow noise and cross-modulation just disappear from the picture.

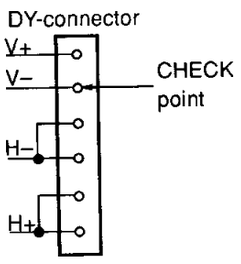
MPX LEVEL ADJUSTMENT (RV205)

1. Receive 400Hz (100% modulation) sound signal.
2. Connect an RMS meter to pin 12 of MM201.
3. Adjust RV205 so that the MPX level is 247.5 ±17.7mVrms.

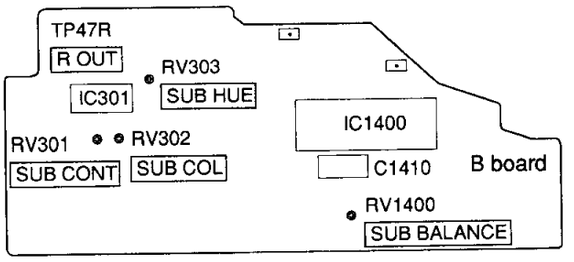


H.FREQ ADJUSTMENT (RV250)

1. Receive an off air signal.
2. Short circuit between TP (Y SYNC) and TP (12V) with a jumper wire.
3. Adjust RV250 for 15.734 kHz ±50Hz on the frequency counter.
4. Disconnect a jumper wire from TP (SYNC) and TP (12V).

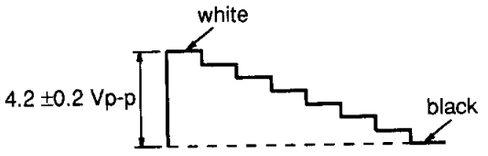


5-2. B BOARD ADJUSTMENTS



SUB CONTRAST ADJUSTMENT (RV301)

1. Receive a color-bar signal.
   PICTURE ..... MAX
   BRT ..... CENTER
   COLOR ..... MIN
   SHARP ..... MIN
2. Connect an oscilloscope to the TP47R (R OUT).
3. Adjust RV301 (SUB CONT) so that voltage is 4.2 ±0.2Vp-p.

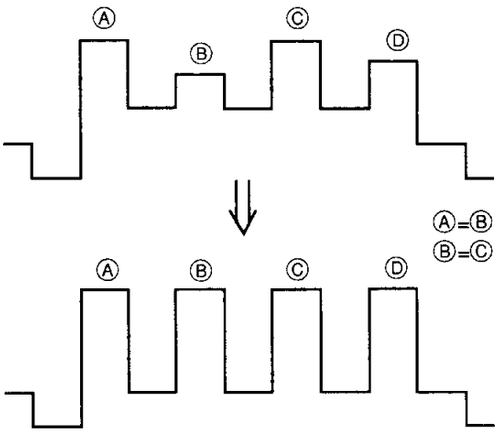


SUB BALANCE ADJUSTMENT (RV1400)

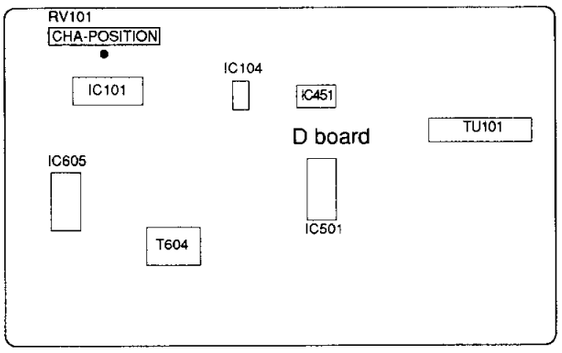
1. Input 400 Hz 200mVrms signal.
2. Adjust RV1400 (SUB-BALANCE) so that the output level of ② pin B-4 connector and ② pin B-2 connector to be the same level.

SUB COLOR AND SUB HUE ADJUSTMENTS (RV302, 303)

1. Receive a color bar signal.
2. Set PICTURE and BRT to normal.
3. Connect an oscilloscope to the TP47R (R OUT).
4. Adjust RV302 (SUB-COL) and RV303 (SUB-HUE) to be the same levle.



5-3. D BOARD ADJUSTMENTS



CHARACTER POSITION (RV101)

1. Receive a color-bar signal.
2. Set the PICTURE control to maximum setting and set the BRIGHTNESS control to center click position.
3. Press the PICTURE control button until this picture level becomes maximum.
4. Adjust RV101 as shown in Fig. 1.

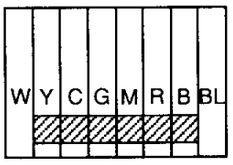
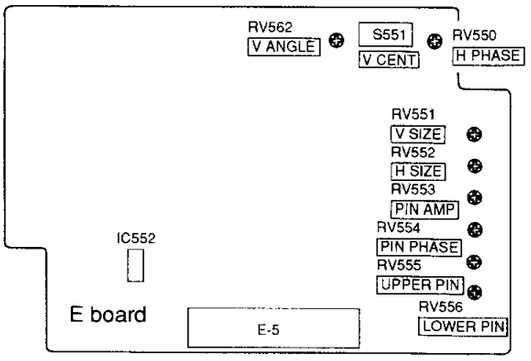
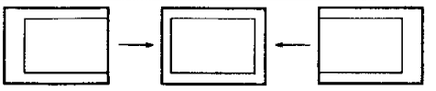


Fig. 1

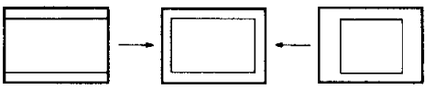
5-4. E BOARD ADJUSTMENTS



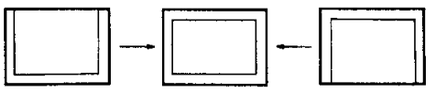
H. PHASE (HORIZONTAL PHASE) (RV550)



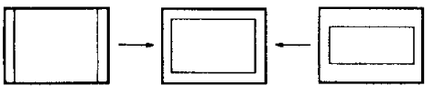
H. SIZE (HORIZONTAL SIZE) (RV552)



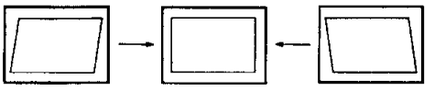
V. CENT (VERTICAL CENTER) (S551)



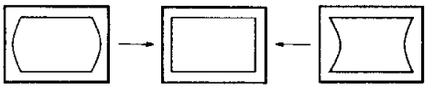
V. SIZE (VERTICAL SIZE) (RV551)



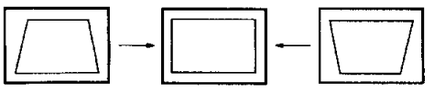
V. ANGLE (VERTICAL ANGLE) (RV562)



PIN. AMP (PINCUSHION AMPLIFIER) (RV553)



PIN. PHASE (PINCUSHION PHASE) (RV554)

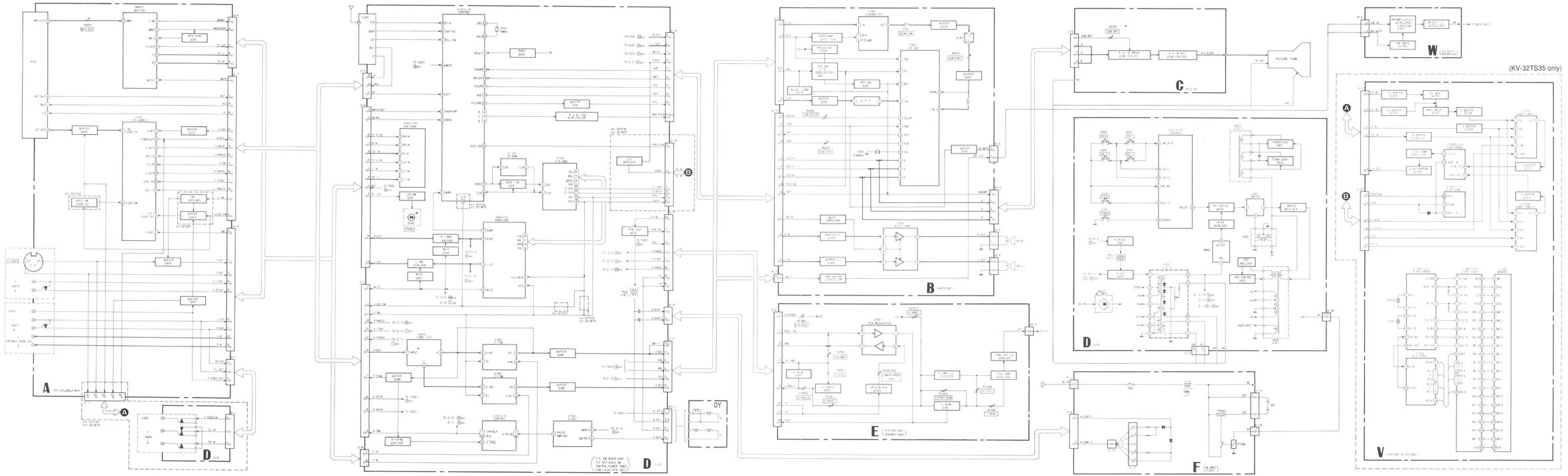


UPPER PIN (RV555)

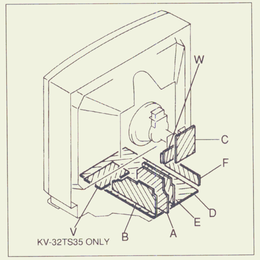
LOWER PIN (RV556)

SECTION 6
DIAGRAMS

6-1. BLOCK DIAGRAM



6-2. CIRCUIT BOARDS LOCATION



Part replaced (◢)	Adjustment (⋈)
IC601, PM501, Q605, Q606, C536, C639, R630, R629, R621, R620, R546, R542, R537	R542 (HOLD-DOWN)
IC601, PM501, Q606, Q605, D507, T503, C639, C536, C535, R630, R629, R621, R620, R543, R546, R537, R520	R543 (HOLD-DOWN)

- All voltages are in V.
- Voltage are dc with respect to ground unless otherwise noted.
- Readings are taken with a 10 MΩ digital multimeter.
- Readings are taken with a color-bar signal input.
- Voltage variations may be noted due to normal production tolerance.
- ▬▬: B+ bus.
- ▬▶: signal path.

Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RW	NONFLAMMABLEWIREWOUND
	: RS	NONFLAMMABLEMETALOXIDE
	: RB	NONFLAMMABLE CEMENT
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

Note:
The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note:
Les composants identifiés par un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

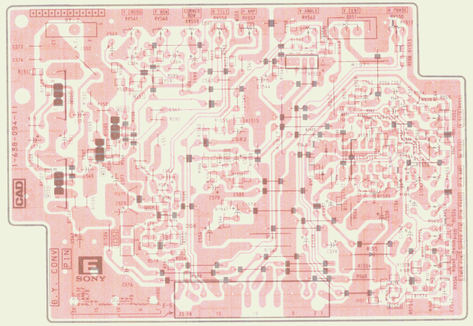
6-3. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note:
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics.
- Indication of resistance, which does not have one for rating electrical power, is as follows.

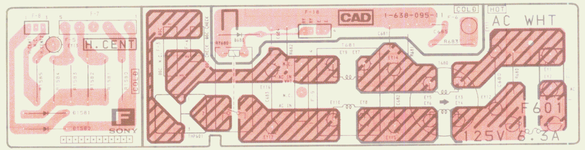
  Pitch: 5 mm
  Rating electrical power 1/4W
- All resistors are in ohms.
- ▭: nonflammable resistor.
- ▭: fusible resistor.
- △: internal component.
- ▭: panel designation, and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- The components identified by ⋈ in this basic schematic diagram have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation.
  Should replacement be required, replace only with the value originally used.
- When replacing components identified by ◢, make the necessary adjustments indicated. If results do not meet the specified value, change the component identified by ⋈ and repeat the adjustment until the specified value is achieved.
  (Refer to R542 and R543 on page 32-33 in the Service Manual.)
- When replacing the part in below table be sure to parform the related adjustment.

E [H/V DEF. ADJ. / DUNAMIC CONV.] **F** [AC INPUT / H. CENT] **A** [JUNGLE, VIF/SIF, MPX] **B** [Y/C, RGB / AUDIO OUT]

— E Board —

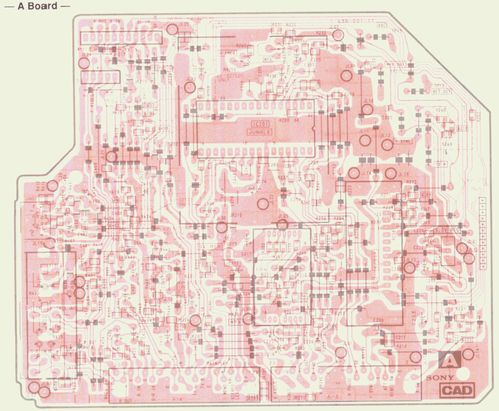


— F Board —

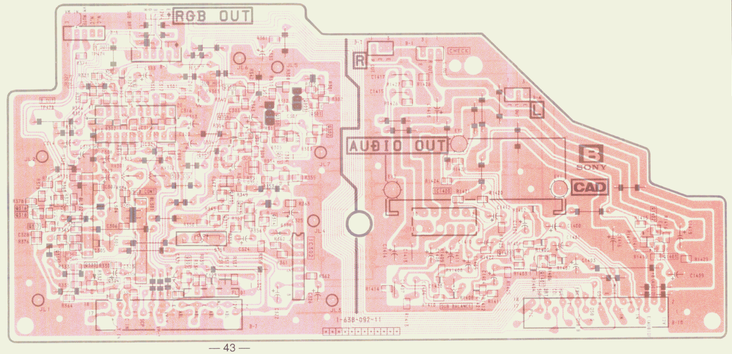


NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

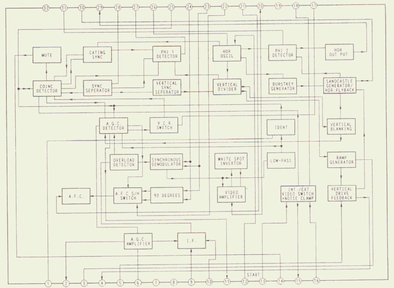
— A Board —



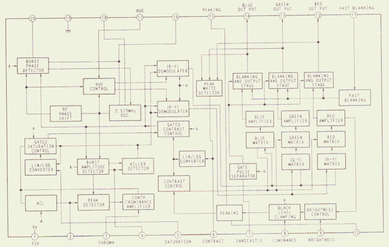
— B Board —



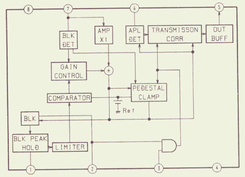
A BOARD IC201 TDA8302

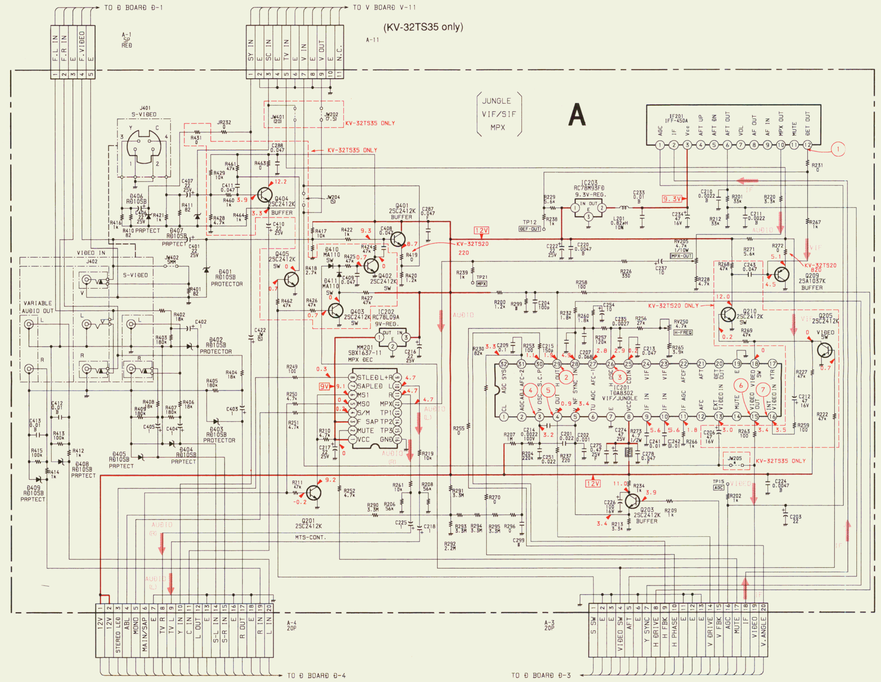


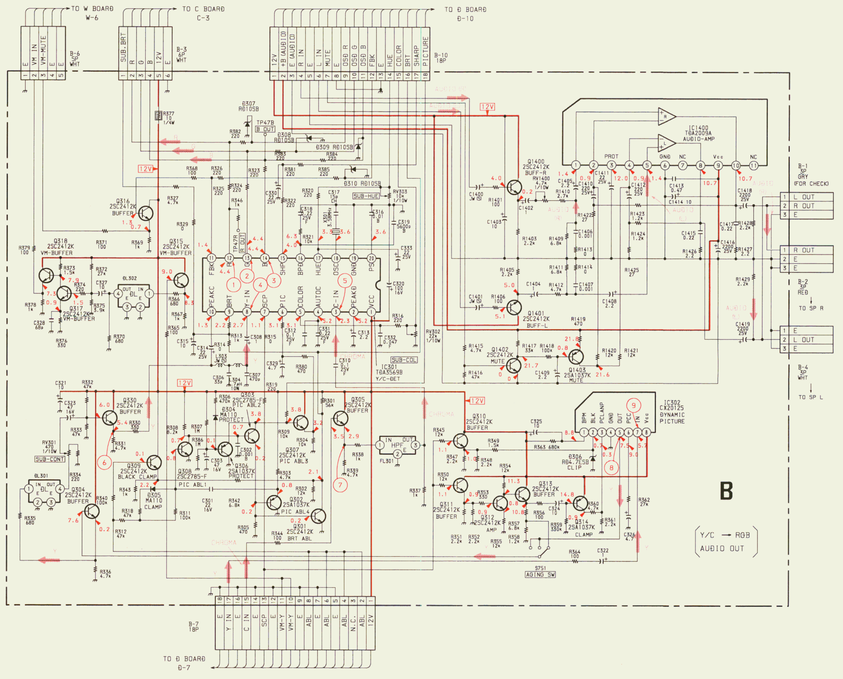
B BOARD IC301 TDA3569B



B BOARD IC302 CX20125

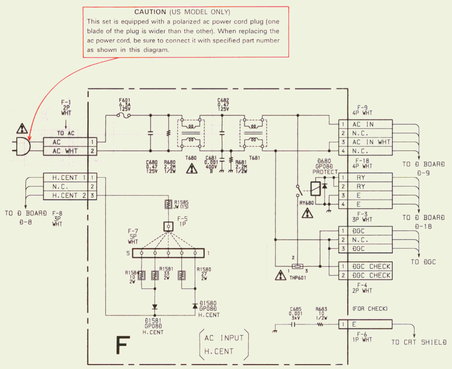






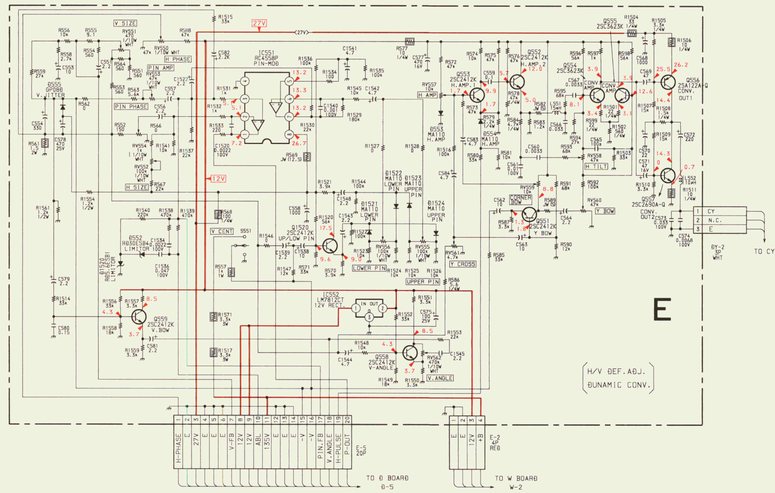
— A Board —

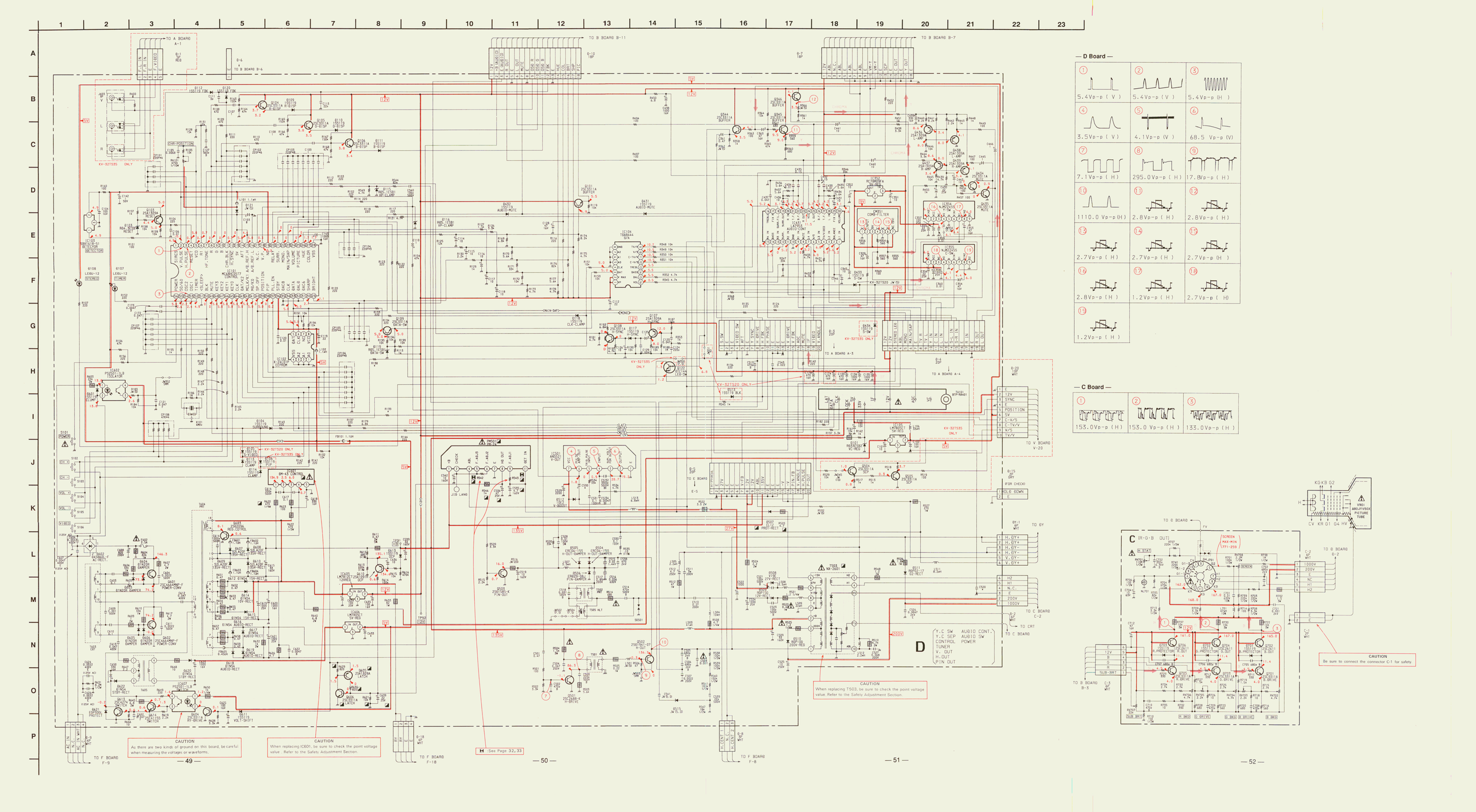
① 4.2Vp-p (H)	② 9.9Vp-p (H)	③ 2.6Vp-p (H)
④ 2.2Vp-p (V)	⑤ 3.0 Vp-p (V)	⑥ 4.4 Vp-p (H)
⑦ 3.2Vp-p (H)		


CAUTION (US MODEL ONLY)
This set is equipped with a polarized ac power cord plug (one blade of the plug is wider than the other). When replacing the ac power cord, be sure to connect it with specified part number as shown in this diagram.
F
AC INPUT
H.CENT
TO Ø BOARD Ø-9
TO Ø BOARD Ø-18
TO Ø BOARD Ø-8
TO CRT SHIELD

— B Board —

① 8.6Vp-p (H)	② 8.6Vp-p (H)	③ 8.6Vp-p (H)
④ 0.7Vp-p (H)	⑤ 0.3 Vp-p (V)	⑥ 0.9 Vp-p (H)
⑦ 3.9Vp-p (H)	⑧ 1.9 Vp-p(H)	⑨ 1.9Vp-p (H)



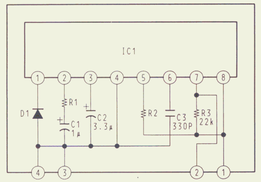

— D Board —
5.4Vp-p (V)
5.4Vp-p (V)
5.4Vp-p (H)
3.5Vp-p (V)
4.1Vp-p (V)
68.5 Vp-p (V)
7.1Vp-p (H)
295.0Vp-p (H)
17.8Vp-p (H)
1110.0 Vp-p(H)
2.8Vp-p (H)
2.8Vp-p (H)
2.7Vp-p (H)
2.7Vp-p (H)
2.7Vp-p (H)
2.8Vp-p (H)
1.2Vp-p (H)
2.7Vp-p (H)
1.2Vp-p (H)
— C Board —
153.0Vp-p (H)
153.0 Vp-p (H)
133.0Vp-p (H)
TO A BOARD A-1
TO B BOARD B-6
TO B BOARD B-11
TO B BOARD B-7
TO A BOARD A-5
TO A BOARD A-4
TO V BOARD V-20
TO E BOARD E-5
TO C BOARD C-2
TO CRT
TO F BOARD F-9
TO F BOARD F-18
TO F BOARD F-8
TO D BOARD D-2
TO B BOARD B-5
TO G BOARD G-1
TO G BOARD G-2
KG KB G2
CV KR G1 G4 HV
VR01 A80JYY50X PICTURE TUBE
D
Y.C SW
Y.C SEP
CONTROL
TUNER
V. OUT
H.OUT
PIN OUT
AUDIO CONT.
AUDIO SW
POWER
C
IR·O·B OUT
SCREEN MAX-MIN 171-259
CAUTION
As there are two kinds of ground on this board, be careful when measuring the voltages or waveforms.
CAUTION
When replacing IC601, be sure to check the point voltage value. Refer to the Safety Adjustment Section.
CAUTION
When replacing T503, be sure to check the point voltage value. Refer to the Safety Adjustment Section.
CAUTION
Be sure to connect the connector C-1 for safety.
See Page 32,33
— 49 —
— 50 —
— 51 —
— 52 —

KV-32TS20/32TS35 RM-791 RM-Y102 KV-32TS20/32TS35 RM-791 RM-Y102

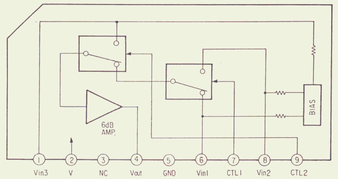
D [Y.C SW, AUDIO CONT, Y.C SEP, AUDIO SW, CONTROL, POWER, TUNER, V. OUT, H. OUT, PIN OUT]

C [R.G.B. OUT]

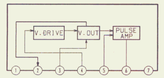
D BOARD IC103 SBX1618-51



D BOARD IC354/355 NJM2245S



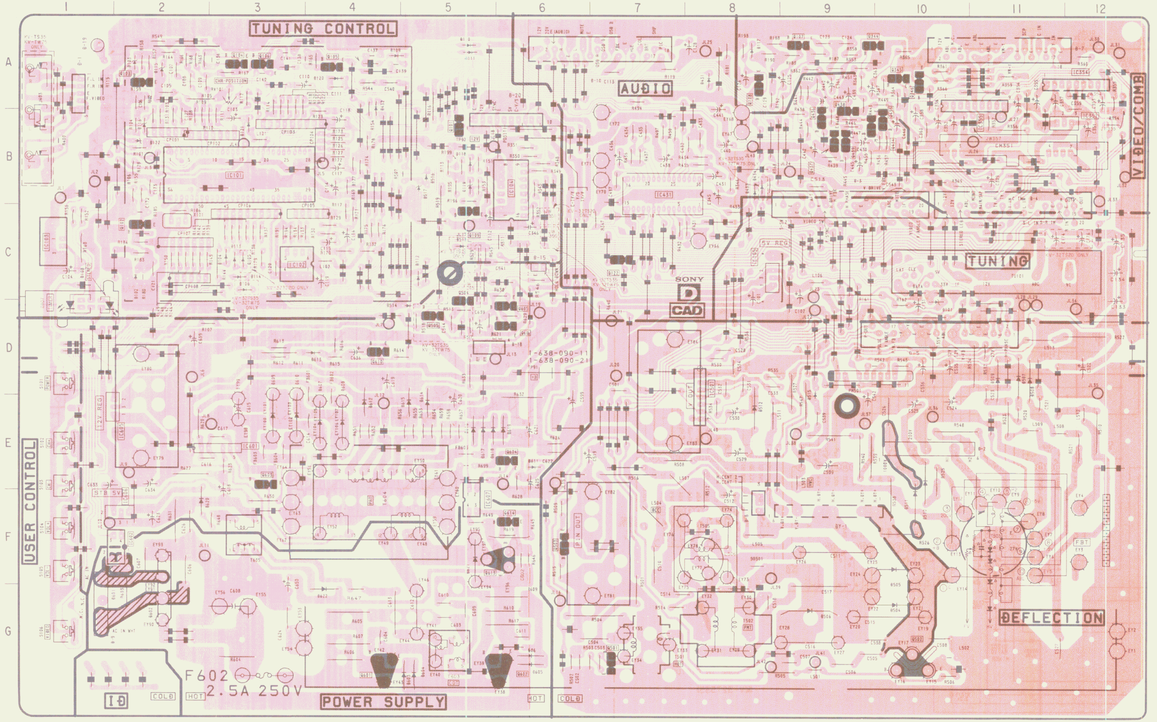
D BOARD IC501 AN5521



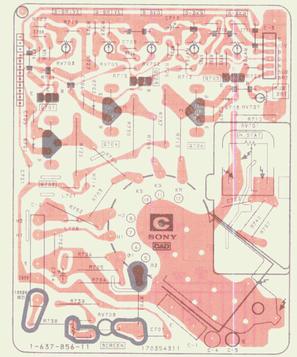
— D Board —

IC		DIODE		0622 G-4
IC101	B-3	D101	B-10	
IC102	C-3	D103	A-2	VARIABLE RESISTOR
IC103	C-1	D104	C-3	RV101 A-3
IC104	B-6	D105	C-3	
IC105	C-8	D107	B-1	
IC352	B-12	D108	B-1	
IC354	A-12	D109	A-4	
IC355	A-11	D110	A-5	
IC431	B-7	D111	A-5	
IC501	B-8	D112	C-5	
IC601	E-3	D113	C-3	
IC602	F-2	D114	C-3	
IC605	E-2	D115	A-2	
IC606	F-2	D116	B-2	
IC607	F-3	D117	A-8	
		D118	B-5	
		D119	B-5	
		D120	A-4	
TRANSISTOR		D121	B-3	
Q101	B-5	D431	A-8	
Q103	A-2	D432	A-4	
Q104	A-3	D433	B-8	
Q105	A-4	D504	G-10	
Q106	A-3	D505	F-10	
Q107	A-9	D506	G-9	
Q108	A-8	D507	G-11	
Q109	C-5	D508	G-11	
Q122	C-7	D509	G-11	
Q344	A-9	D510	E-10	
Q345	A-10	D511	F-10	
Q346	A-10	D512	E-8	
Q434	B-9	D513	C-5	
Q435	B-10	D601	G-4	
Q436	B-9	D602	G-2	
Q437	B-9	D603	G-5	
Q438	A-9	D604	G-5	
Q439	B-9	D605	G-6	
Q501	G-7	D606	G-6	
Q502	G-10	D607	E-4	
Q503	F-6	D608	E-4	
Q504	G-5	D609	G-5	
Q505	G-5	D610	G-3	
Q601	G-4	D611	E-6	
Q602	G-6	D612	E-4	
Q603	E-3	D613	G-4	
Q604	E-6	D614	E-5	
Q605	G-6	D615	E-5	
Q606	G-6	D616	E-5	
Q610	G-4	D617	E-5	
Q613	F-6	D618	E-5	
Q614	F-6	D619	E-6	
		D620	F-2	
		D621	F-5	

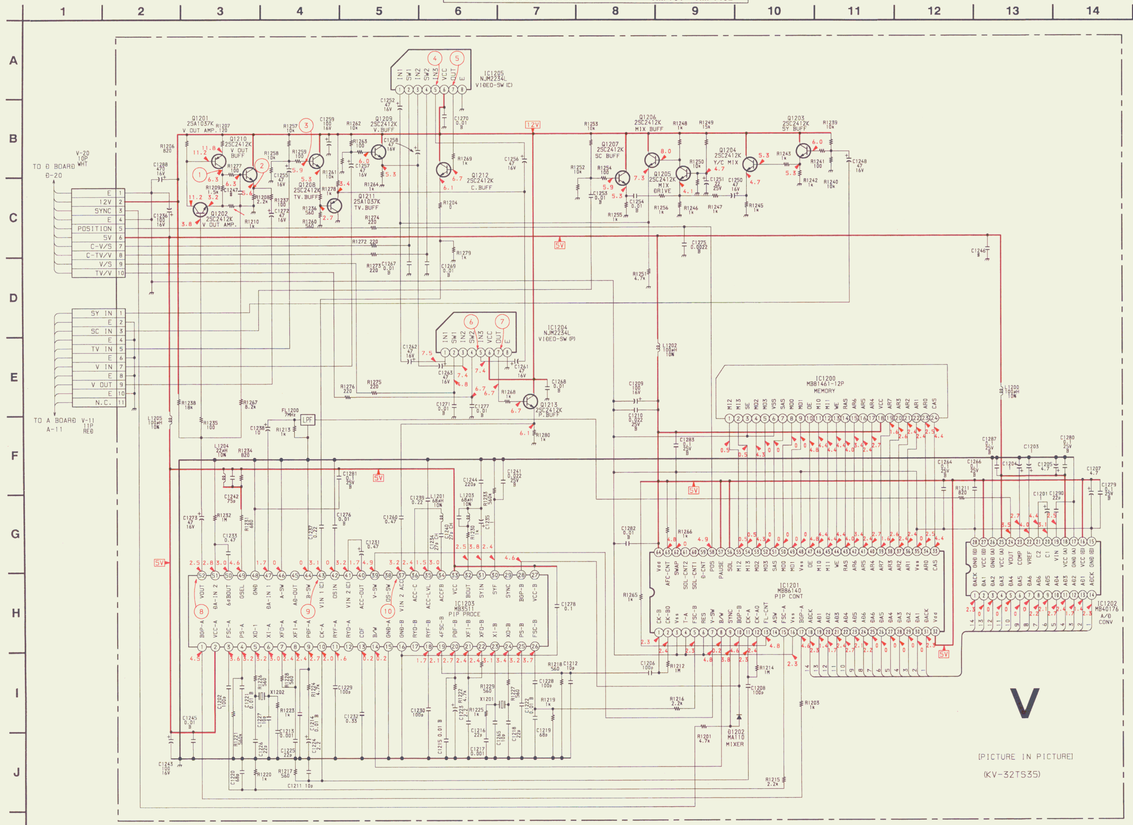
— D Board —



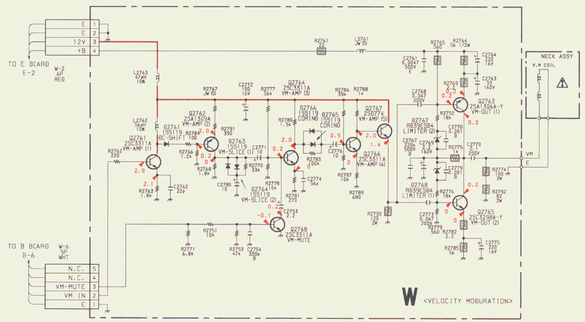
— C Board —



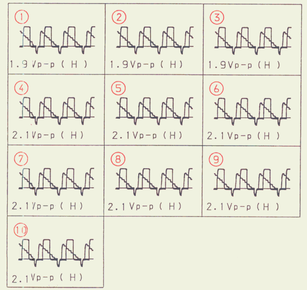
NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.



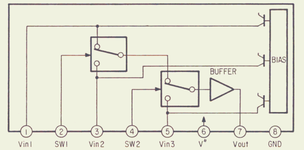
KV-32TS20/32TS35 RM-791 RM-Y102 KV-32TS20/32TS35 RM-791 RM-Y102



— V Board —

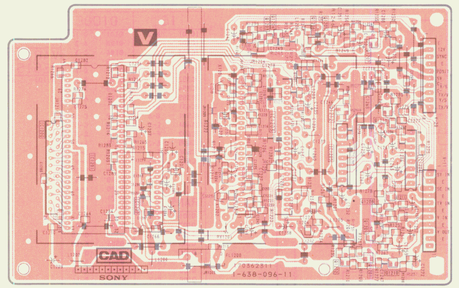


V BOARD IC1205 NJM2234L

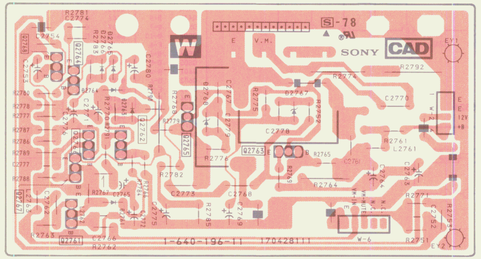


V [PICTURE IN PICTURE] W [VELOCITY MODURATION]

— V Board —



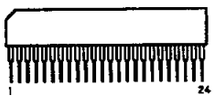
— W Board —



6-4. SEMICONDUCTORS

AN5521

MB81461-12PSZTNF



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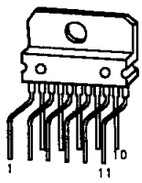

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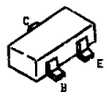
2SA1162G
2SB709A-R-TX
2SC2412K-QR
2SD601A-Q



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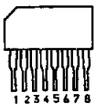
MB886140

CX20125
NJM2234L



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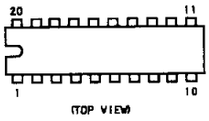

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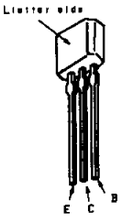
2SC278-HFE
2SC2785-HFE
2SC3311A



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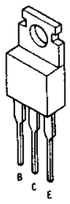

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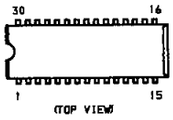

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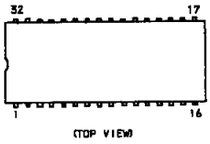

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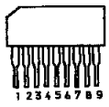

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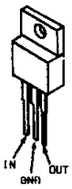
RC78M09FA



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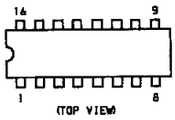

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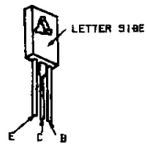
2SC2611
2SC2688-LK



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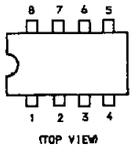
X24C01P



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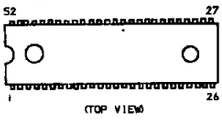
MB3511



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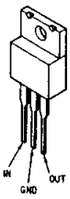
2SC3298B-Y

RC78M93FD



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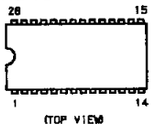
MB40176



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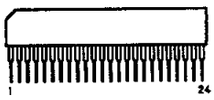
RC78L09A

6-4. SEMICONDUCTORS

AN5521

MB81461-12PSZPINP



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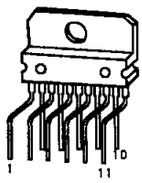

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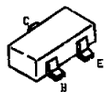

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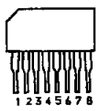

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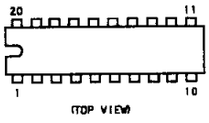

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2SC2785-HFE
2SC3311A

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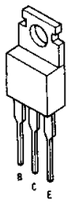

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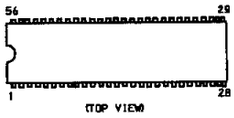

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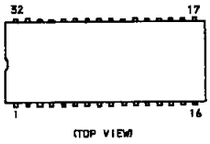

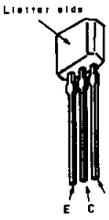

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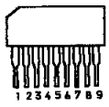

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LM7812CT
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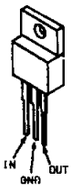

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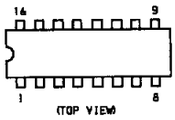

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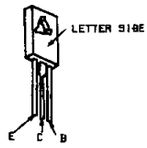
2SC2611
2SC2688-LK



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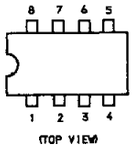

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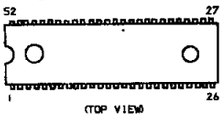
MB3511



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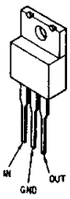

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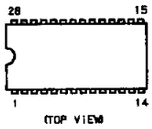
2SC3298B-Y

2SD774-34

MB40176



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RÐ30ESB2
RÐ33ESB2
RÐ39ESB4
RÐ4.3ESB1
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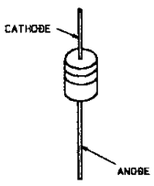
RÐ5.1ESB1
RÐ5.6ESB1
RÐ6.2ESB1
RÐ8.2SB3
1SS119



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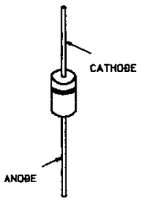

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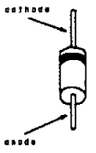

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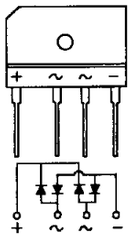

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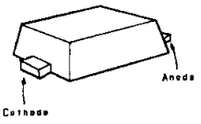

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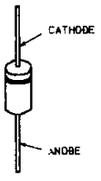

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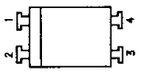


U05G

SECTION 7
EXPLODED VIEWS

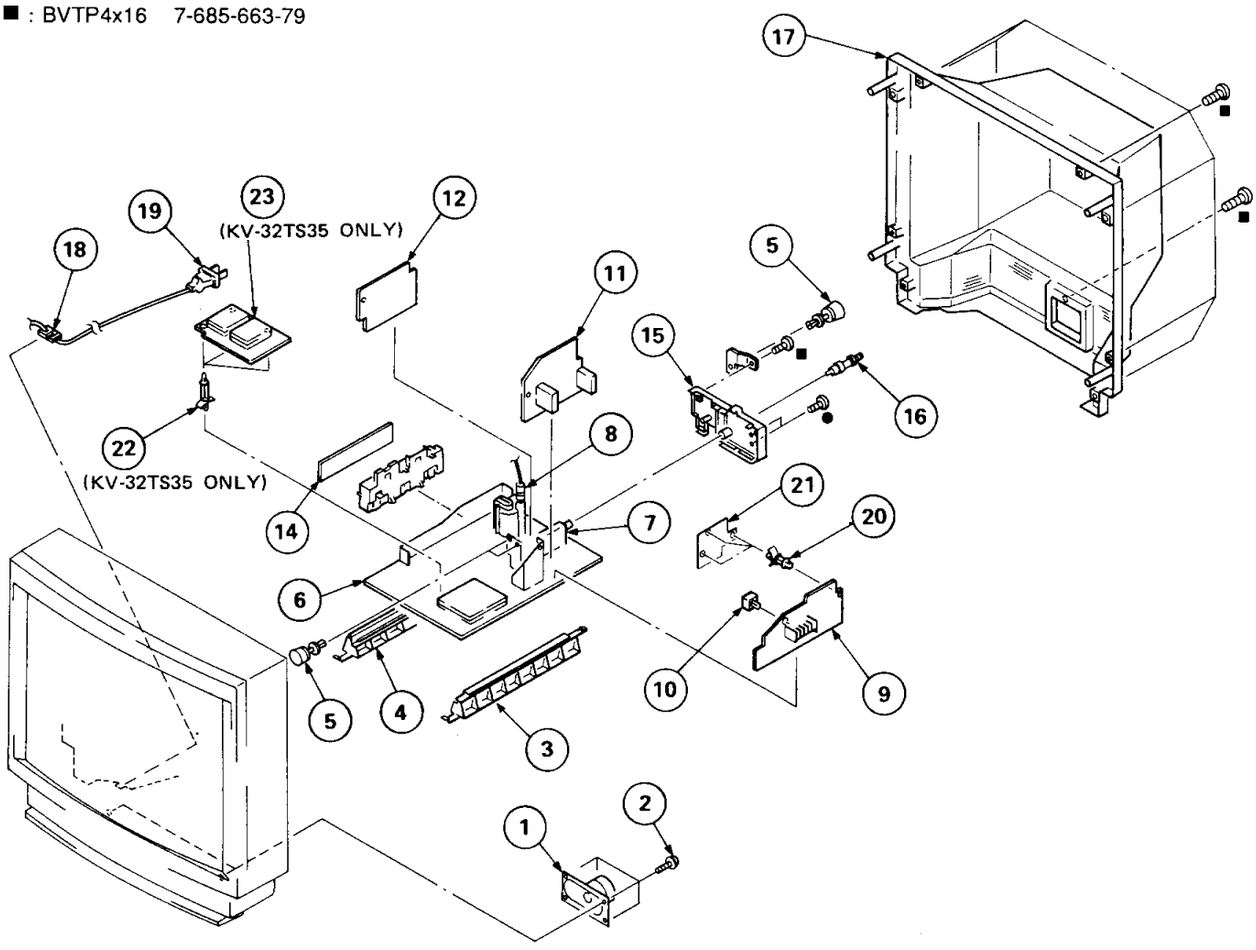
NOTE:
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

7-1. CHASSIS

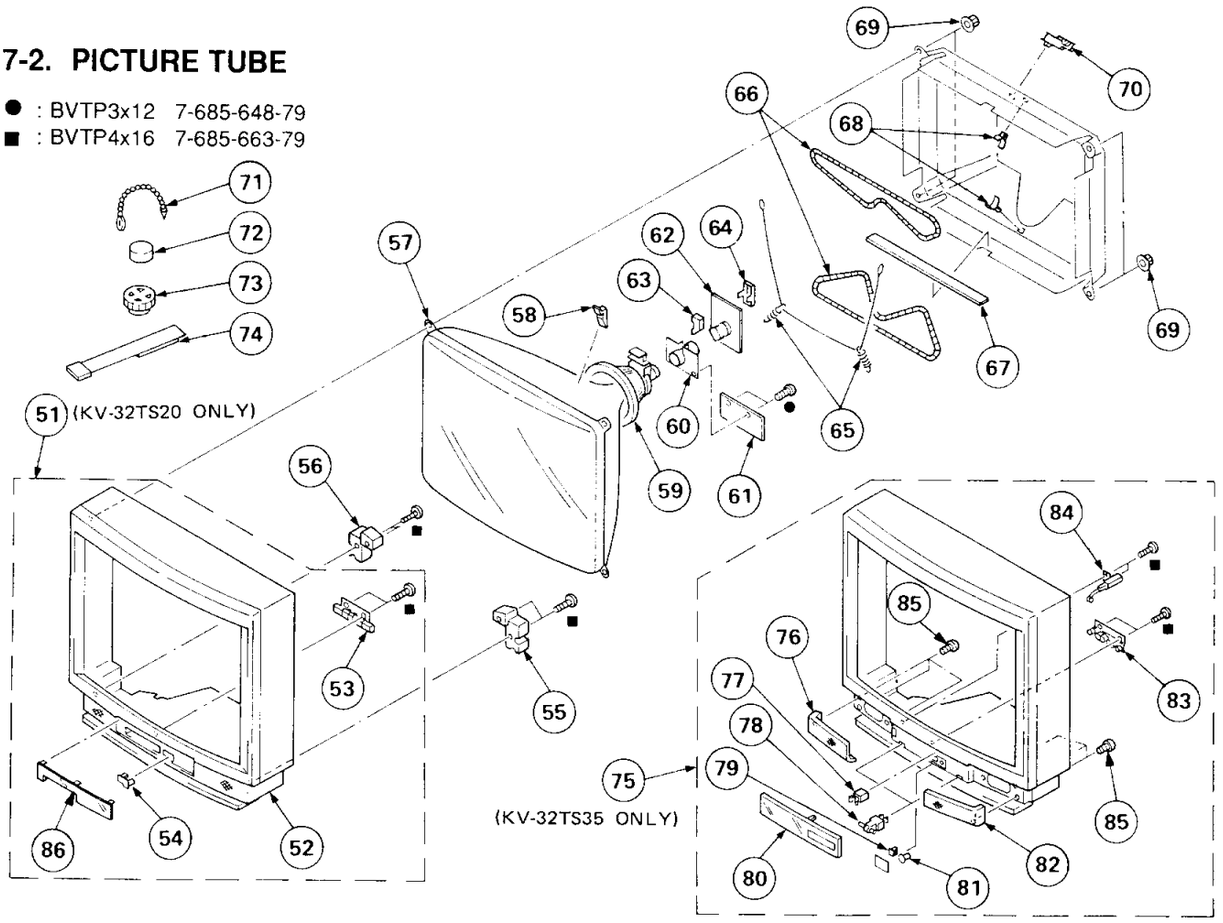
● : BVTP3x12 7-685-648-79
■ : BVTP4x16 7-685-663-79



REF.NO.	PART NO.	DESCRIPTION	REMARK
1	1-544-549-11	SPEAKER	
2	4-388-477-01	SCREW(3X16),TAPPING,+BV WASHER	
3	*4-031-418-01	GUIDE (LEFT), PC BOARD	
4	*4-031-417-01	GUIDE (RIGHT), PC BOARD	
6	*A-1345-962-A	D BOARD, COMPLETE (KV-32TS20(U) ONLY)	
	*A-1345-955-A	D BOARD, COMPLETE (KV-32TS35(U) ONLY)	
	*A-1345-991-A	D BOARD, COMPLETE (KV-32TS35(C) ONLY)	
7	⚠1-465-371-11	TUNER, ET (BTP-RA401) (KV-32TS20(U), KV32TS35(U) ONLY)	
	⚠1-465-371-21	TUNER, ET (BTP-RA401)(KV-32TS35(C) ONLY)	
8	⚠1-439-502-11	TRANSFORMER ASSY, FLYBACK (NX-2600A3)	
9	A-1135-682-A	B BOARD, COMPLETE	
10	*4-032-236-01	HOLDER (B), PC BOARD	
11	A-1296-847-A	A BOARD, COMPLETE (KV-32TS20(U) ONLY)	
	A-1296-832-A	A BOARD, COMPLETE (KV-32TS35(U/C) ONLY)	
12	A-1345-954-A	E BOARD, COMPLETE	
14	*1-638-095-11	F BOARD	
16	1-573-657-11	PLUG, F-PIN	
17	4-031-385-01	COVER, REAR	
18	⚠4-388-328-01	GROMMET, AC CORD	
19	⚠1-590-492-21	CORD, POWER (WITH CONNECTOR)	
20	*3-703-353-03	SUPPORT, PC BOARD	
21	4-033-125-01	PLATE, SHIELD	
22	*3-703-353-10	SUPPORT, PC BOARD (KV-32TS35(U/C) ONLY)	
23	A-1347-053-A	V BOARD, COMPLETE (KV-32TS35(U/C) ONLY)	

7-2. PICTURE TUBE

● : BVTP3x12 7-685-648-79
■ : BVTP4x16 7-685-663-79



The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION	REMARK
51	X-4029-790-1	CABINET ASSY (WITH BEZEL ASSY) 52-54,86	(KV-32TS20(U) ONLY)
52	X-4029-789-1	CABINET SUB ASSY (WITH BEZEL SUB ASSY)	(KV-32TS20(U) ONLY)
53	X-4029-807-1	BUTTON ASSY, MULTI (KV-32TS20(U) ONLY)	(KV-32TS20(U) ONLY)
54	*4-032-115-01	GUIDE (COMBINATION), LIGHT	(KV-32TS20(U) ONLY)
55	*4-031-428-01	SUPPORT (RIGHT) (PICTURE TUBE)	
56	*4-031-430-01	SUPPRT (LEFT) (PICTURE TUBE)	
57	⚠8-733-723-05	PICTURE TUBE (A80JYV50X)	
58	3-704-495-01	SPACER, DY	
59	⚠1-451-315-11	DEFLECTION YOKE (Y34FXA)	
60	⚠1-452-579-21	NECK ASSY, PICTURE TUBE (NA322)	
61	*A-1371-749-A	W BOARD, COMPLETE	
62	*A-1331-128-A	C BOARD, COMPLETE	
63	*4-379-167-01	COVER (MAIN), CV	
64	*4-379-160-01	COVER (REAR LID), CV	
65	4-369-318-00	SPRING, TENSION	
66	⚠1-426-356-11	COIL, DEMAGNETIZATION	
67	4-385-725-01	SHEET, BLOTTING	
68	*4-371-629-01	STOPPER, WIRE	
69	4-387-204-01	NUT, SPECIAL, PICTURE TUBE	
70	*4-387-284-01	HOLDER, LEAD	
71	4-308-870-00	CLIP, LEAD WIRE	
72	1-452-032-00	MAGNET, DISK; 10MM ϕ	
73	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM ϕ	
74	X-4306-312-0	PERMALLOY ASSY, CONVERGENCE	
75	X-4029-761-1	CABINET ASSY (WITH BEZEL ASSY) 76-85	(KV-32TS35(U/C) ONLY)
76	X-4029-756-1	FRAME ASSY (LEFT), SPEAKER	(KV-32TS35(U/C) ONLY)
77	4-392-036-01	CATCHER, PUSH (KV-32TS35(U/C) ONLY)	
78	3-703-035-11	SHAFT, LID (KV-32TS35(U/C) ONLY)	
79	*4-032-389-01	PLATE, LIGHT GUIDE (KV-32TS35(U/C) ONLY)	
80	X-4029-766-1	DOOR ASSY, CONTROL (KV-32TS35(U/C) ONLY)	
81	*4-389-517-01	GUIDE (R), LIGHT (KV-32TS35(U/C) ONLY)	
82	X-4029-755-1	FRAME ASSY (RIGHT), SPEAKER	(KV-32TS35(U/C) ONLY)
83	X-4029-805-1	BUTTON ASSY, MULTI (KV-32TS35(U/C) ONLY)	
84	*4-032-393-01	DAMPER (KV-32TS35(U/C) ONLY)	
85	4-319-520-11	SCREW, SPECIAL (+PW4x30)	(KV-32TS35(U/C) ONLY)
86	*X-4029-751-1	PANEL ASSY, CONTROL (KV-32TS20(U) ONLY)	

SECTION 8
ELECTRICAL PARTS LIST

B

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS
- All resistors are in ohms
- F: nonflammable

When indicating parts by reference number, please include the board name.

CAPACITORS
- MF: μF, PF: μμF

COILS
- MMH: mH, UH: μH

- The components identified by ⧓ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation.
Should replacement be required, replace only with the value originally used.

REF.NO.	PART NO.	DESCRIPTION			REMARK
	A-1135-682-A	B BOARD, COMPLETE			
		**********			
	*4-341-752-01	EYELET (EY1-EY3)			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
		<CONNECTOR>			
B1	*1-560-123-00	PLUG, CONNECTOR (2.5MM) 3P			
B2	*1-564-506-11	PLUG, CONNECTOR 3P			
B3	*1-564-509-11	PLUG, CONNECTOR 6P			
B4	*1-564-506-11	PLUG, CONNECTOR 3P			
B6	*1-564-508-11	PLUG, CONNECTOR 5P			
B7	1-573-300-11	CONNECTOR, BOARD TO BOARD 18P			
B10	1-573-300-11	CONNECTOR, BOARD TO BOARD 18P			
		<CAPACITOR>			
C301	1-124-282-00	ELECT	22MF	20%	16V
C302	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C303	1-126-233-11	ELECT	22MF	20%	25V
C306	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C307	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C308	1-124-903-11	ELECT	1MF	20%	50V
C310	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C312	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C313	1-124-925-11	ELECT	2.2MF	20%	50V
C314	1-126-233-11	ELECT	22MF	20%	25V
C315	1-124-907-11	ELECT	10MF	20%	50V
C316	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C317	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
C318	1-164-222-11	CERAMIC CHIP	0.22MF		25V
C319	1-163-018-00	CERAMIC CHIP	0.0056MF	10%	50V
C320	1-126-101-11	ELECT	100MF	20%	16V
C321	1-124-907-11	ELECT	10MF	20%	50V
C322	1-124-903-11	ELECT	1MF	20%	50V
C323	1-124-477-11	ELECT	47MF	20%	16V
C324	1-124-907-11	ELECT	10MF	20%	50V
C325	1-124-907-11	ELECT	10MF	20%	50V
C326	1-124-927-11	ELECT	4.7MF	20%	50V
C327	1-124-907-11	ELECT	10MF	20%	50V
C328	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C329	1-124-927-11	ELECT	4.7MF	20%	50V
C330	1-126-233-11	ELECT	22MF	20%	25V
C331	1-164-222-11	CERAMIC CHIP	0.22MF		25V
C332	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C333	1-126-233-11	ELECT	22MF	20%	25V
C1402	1-124-903-11	ELECT	1MF	20%	50V
C1403	1-124-907-11	ELECT	10MF	20%	50V
C1404	1-124-903-11	ELECT	1MF	20%	50V
C1405	1-124-925-11	ELECT	2.2MF	20%	50V
C1406	1-130-471-00	MYLAR	0.001MF	5%	50V
C1407	1-130-471-00	MYLAR	0.001MF	5%	50V
C1408	1-124-925-11	ELECT	2.2MF	20%	50V
C1409	1-124-925-11	ELECT	2.2MF	20%	50V
C1410	1-124-120-11	ELECT	220MF	20%	25V
C1411	1-126-233-11	ELECT	22MF	20%	25V
C1412	1-124-120-11	ELECT	220MF	20%	25V
C1413	1-136-173-00	FILM	0.47MF	5%	50V
C1414	1-124-907-11	ELECT	10MF	20%	50V
C1415	1-136-169-00	FILM	0.22MF	5%	50V
C1416	1-124-563-11	ELECT	2200MF	20%	25V
C1417	1-136-169-00	FILM	0.22MF	5%	50V
C1418	1-124-563-11	ELECT	2200MF	20%	25V
C1419	1-124-563-11	ELECT	2200MF	20%	25V
		<DIODE>			
D301	8-719-158-39	DIODE RD10S-B			
D302	8-719-158-39	DIODE RD10S-B			
D303	8-719-158-39	DIODE RD10S-B			
D304	8-719-404-46	DIODE MA110			
D305	8-719-404-46	DIODE MA110			
D306	8-719-109-81	DIODE RD4.7ES-B2			
D307	8-719-158-39	DIODE RD10S-B			
D308	8-719-158-39	DIODE RD10S-B			
D309	8-719-158-39	DIODE RD10S-B			
D310	8-719-158-39	DIODE RD10S-B			
		<DELAY LINE>			
DL301	1-415-851-11	DELAY LINE			
DL302	1-415-851-11	DELAY LINE			
		<FILTER>			
FL301	1-239-151-11	FILTER, HIGH PASS			
		<IC>			
IC301	8-759-510-89	IC TDA3569B			
IC302	8-752-012-52	IC CX20125			
IC1400	8-759-980-43	IC TDA2009A			
		<COIL>			
L304	1-408-405-00	INDUCTOR	4.7UH		
		<TRANSISTOR>			
Q301	8-729-920-74	TRANSISTOR 2SC2412K-QR			
Q302	8-729-216-22	TRANSISTOR 2SA1162-G			
Q303	8-729-119-78	TRANSISTOR 2SC2785-HFE			

B

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q304	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q305	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q306	8-729-216-22	TRANSISTOR 2SA1162-G	
Q307	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q308	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q309	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q310	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q311	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q312	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q313	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q314	8-729-216-22	TRANSISTOR 2SA1162-G	
Q315	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q316	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q317	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q318	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q330	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1400	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1401	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1402	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1403	8-729-216-22	TRANSISTOR 2SA1162-G	
		<RESISTOR>	
R301	1-216-091-00	METAL GLAZE 56K 5% 1/10W	
R302	1-216-075-00	METAL GLAZE 12K 5% 1/10W	
R303	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R304	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R305	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R306	1-216-113-00	METAL GLAZE 470K 5% 1/10W	
R307	1-216-121-00	METAL GLAZE 1M 5% 1/10W	
R308	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W	
R309	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R311	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R312	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R313	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R314	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R315	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R316	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R318	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R319	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R320	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R321	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R322	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R323	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R324	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R325	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R326	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R327	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R329	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R330	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R331	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R332	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R333	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R334	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R335	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R336	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R337	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R338	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R339	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R340	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R342	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	
R343	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R344	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R345	1-216-075-00	METAL GLAZE 12K 5% 1/10W	
R346	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R347	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R348	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R349	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R350	1-216-075-00	METAL GLAZE 12K 5% 1/10W	
R351	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R352	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R353	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R354	1-216-075-00	METAL GLAZE 12K 5% 1/10W	
R355	1-216-075-00	METAL GLAZE 12K 5% 1/10W	
R356	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R357	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	
R358	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
R359	1-216-109-00	METAL GLAZE 330K 5% 1/10W	
R360	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R361	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R362	1-216-083-00	METAL GLAZE 27K 5% 1/10W	
R363	1-216-117-00	METAL GLAZE 680K 5% 1/10W	
R364	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R365	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R366	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R367	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R368	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R369	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R370	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R371	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R372	1-216-083-00	METAL GLAZE 27K 5% 1/10W	
R373	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R374	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R375	1-216-063-00	METAL GLAZE 3.9K 5% 1/10W	
R376	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R377	1-247-688-11	CARBON 10 5% 1/4W	F
R378	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R379	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R380	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R381	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R382	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R383	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R384	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R385	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R386	1-247-903-00	CARBON 1M 5% 1/4W	
R1401	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1403	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R1405	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R1406	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1409	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	
R1410	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W	
R1411	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	
R1412	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R1413	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R1414	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R1415	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R1416	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R1417	1-216-085-00	METAL GLAZE 33K 5% 1/10W	
R1418	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R1419	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R1420	1-216-075-00	METAL GLAZE 12K 5% 1/10W	
R1421	1-216-075-00	METAL GLAZE 12K 5% 1/10W	
R1422	1-216-011-00	METAL GLAZE 27 5% 1/10W	
R1423	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
R1424	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
R1425	1-216-011-00	METAL GLAZE 27 5% 1/10W	
R1426	1-216-298-00	METAL GLAZE 2.2 5% 1/10W	
R1427	1-216-298-00	METAL GLAZE 2.2 5% 1/10W	

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

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REF.NO.	PART NO.	DESCRIPTION				REMARK
R1428	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1429	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
		<VARIABLE RESISTOR>				
RV301	1-238-011-11	RES, ADJ, CARBON 470				
RV302	1-238-017-11	RES, ADJ, CARBON 22K				
RV303	1-238-016-11	RES, ADJ, CARBON 10K				
RV1400	1-238-015-11	RES, ADJ, CARBON 4.7K				
		<SWITCH>				
S751	1-554-186-00	SWITCH, LEVER				
		<CRYSTAL>				
X301	1-567-505-11	OSCILLATOR, CRYSTAL				
		**********				
	*1-638-095-11	F BOARD				
		*******				
	*4-341-751-01	EYELET (EY3-EY12, EY14, EY15)				
	*4-341-752-01	EYELET (EY1,EY2,EY13)				
	1-533-223-11	CLIP, FUSE				
		<CAPACITOR>				
C680	⚠1-136-311-51	FILM	0.47MF	20%	125V	
C681	⚠1-161-741-51	CERAMIC	0.001MF	10%	400V	
C682	⚠1-136-311-51	FILM	0.47MF	20%	125V	
C685	1-161-754-00	CERAMIC	0.001MF	10%	3KV	
		<DIODE>				
D680	8-719-911-55	DIODE U05G				
D1580	8-719-911-55	DIODE U05G				
D1581	8-719-911-55	DIODE U05G				
		<CONNECTOR>				
F1	*1-580-843-11	PIN, CONNECTOR (POWER)				
F3	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P				
F4	*1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P				
F5	*1-559-991-21	CONNECTOR ASSY 1P				
F7	*1-508-767-00	PIN, CONNECTOR (5MM PITCH) 5P				
F8	*1-564-506-11	PLUG, CONNECTOR 3P				
F9	*1-508-766-00	PIN, CONNECTOR (5MM PITCH) 4P				
F18	*1-564-507-11	PLUG, CONNECTOR 4P				
		<FUSE>				
F601	⚠1-532-748-11	FUSE, GLASS TUBE 6.3A/125V				
		<RESISTOR>				
R680	⚠1-202-723-91	SOLID	2.2M	10%	1/2W	
R681	⚠1-202-723-91	SOLID	2.2M	10%	1/2W	
R683	1-202-525-00	SOLID	10	10%	1/2W	
R1580	1-216-447-00	METAL OXIDE	27	5%	2W	F
R1581	1-215-883-11	METAL OXIDE	33	5%	2W	F
R1584	1-215-880-00	METAL OXIDE	10	5%	2W	F

REF.NO.	PART NO.	DESCRIPTION				REMARK
		<RELAY>				
RY680	⚠1-515-684-22	RELAY				
		<TRANSFORMER>				
T680	⚠1-424-220-21	TRANSFORMER, LINE FILTER				
T681	⚠1-424-546-11	TRANSFORMER, LINE FILTER				
		<THERMISTOR>				
THP601	⚠1-808-081-14	THERMISTOR, POSITIVE				
		**********				
	A-1296-847-A	A BOARD, COMPLETE (KV-32TS20(U) ONLY)				
		**********				
	A-1296-832-A	A BOARD, COMPLETE (KV-32TS35(U/C) ONLY)				
		**********				
		<CONNECTOR>				
A1	*1-564-508-11	PLUG, CONNECTOR 5P (KV-32TS35(U/C) ONLY)				
A3	1-573-301-11	CONNECTOR, BOARD TO BOARD 20P				
A4	1-573-301-11	CONNECTOR, BOARD TO BOARD 20P				
A11	*1-564-514-11	PLUG, CONNECTOR 11P(KV-32TS35(U/C) ONLY)				
A12	*1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P				
		<CAPACITOR>				
C201	1-130-487-00	MYLAR	0.022MF	5%	50V	
C202	1-130-471-00	MYLAR	0.001MF	5%	50V	
C203	1-126-233-11	ELECT	22MF	20%	50V	
C204	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C206	1-124-477-11	ELECT	47MF	20%	16V	
						(KV-32TS20(U) ONLY)
C207	1-136-163-00	FILM	0.068MF	5%	50V	
C208	1-136-015-00	CERAMIC CHIP	0.0033MF		50V	
						(KV-32TS20(U) ONLY)
C209	1-136-165-00	FILM	0.1MF	5%	50V	
C210	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V	
C211	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V	
C212	1-124-477-11	ELECT	47MF	20%	16V	
						(KV-32TS20(U) ONLY)
C213	1-136-161-00	FILM	0.047MF	5%	50V	
C214	1-106-361-00	MYLAR	0.0022MF	10%	100V	
C215	1-163-121-00	CERAMIC CHIP	150PF	5%	50V	
C216	1-126-233-11	ELECT	22MF	20%	25V	
C217	1-126-233-11	ELECT	22MF	20%	25V	
C218	1-124-903-11	ELECT	1MF	20%	50V	
C219	1-102-116-00	CERAMIC	680PF	10%	50V	
C220	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V	
C222	1-126-233-11	ELECT	22MF	20%	25V	
C224	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V	
C225	1-124-903-11	ELECT	1MF	20%	50V	
C226	1-126-101-11	ELECT	100MF	20%	16V	
C233	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C234	1-124-477-11	ELECT	47MF	20%	16V	
C235	1-130-729-00	FILM	0.0027MF	5%	50V	
C237	1-124-907-11	ELECT	10MF	20%	50V	
C241	1-136-153-00	FILM	0.01MF	5%	50V	
C242	1-136-153-00	FILM	0.01MF	5%	50V	
C243	1-163-035-00	CERAMIC CHIP	0.047MF		50V	
						(KV-32TS20(U) ONLY)
C251	1-130-487-00	MYLAR	0.022MF	5%	50V	

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REF.NO.	PART NO.	DESCRIPTION				REMARK
C254	1-124-907-11	ELECT	10MF	20%	50V	
C274	1-124-477-11	ELECT	47MF	20%	25V	
C275	1-164-005-11	CERAMIC CHIP	0.47MF		25V	
C278	1-101-006-00	CERAMIC	0.047MF		50V	
C287	1-101-006-00	CERAMIC	0.047MF		50V	
C288	1-101-006-00	CERAMIC	0.047MF		50V	(KV-32TS20(C) ONLY)
C401	1-126-233-11	ELECT	22MF	20%	25V	
C402	1-124-903-11	ELECT	1MF	20%	50V	
C403	1-124-903-11	ELECT	1MF	20%	50V	
C404	1-124-903-11	ELECT	1MF	20%	50V	
C405	1-124-903-11	ELECT	1MF	20%	50V	
C406	1-126-233-11	ELECT	22MF	20%	25V	
C407	1-126-233-11	ELECT	22MF	20%	25V	
C408	1-163-035-00	CERAMIC CHIP	0.047MF		50V	(KV-32TS20(U) ONLY)
C409	1-163-035-00	CERAMIC CHIP	0.047MF		50V	(KV-32TS20(U) ONLY)
C410	1-126-233-11	ELECT	22MF	20%	25V	
C411	1-163-035-00	CERAMIC CHIP	0.047MF		50V	(KV-32TS20(U) ONLY)
C412	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C413	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	

<DIODE>

D401	8-719-158-39	DIODE RD10S-B	
D402	8-719-158-39	DIODE RD10S-B	
D403	8-719-158-39	DIODE RD10S-B	
D404	8-719-158-39	DIODE RD10S-B	
D405	8-719-158-39	DIODE RD10S-B	
D406	8-719-158-39	DIODE RD10S-B	
D407	8-719-158-39	DIODE RD10S-B	
D408	8-719-158-39	DIODE RD10S-B	
D409	8-719-158-39	DIODE RD10S-B	
D410	8-719-404-46	DIODE MA110	(KV-32TS20(U) ONLY)
D411	8-719-404-46	DIODE MA110	(KV-32TS20(U) ONLY)

<IC>

IC201	8-759-510-90	IC TDA8302	
IC202	8-759-982-25	IC RC78L09A	
IC203	8-759-982-37	IC RC78M93FD	
MM201	8-741-637-11	IC SBX1637-11	

<IF BLOCK>

IF201	1-464-756-21	IF BLOCK (IFF-450A)	

<JACK>

J401	1-566-846-11	CONNECTOR, (S) TERMINAL 4P	
J402	1-573-658-11	JACK BLOCK, PIN 7P	

<COIL>

L201	1-410-792-31	INDUCTOR	0.82UH

<TRANSISTOR>

Q201	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q203	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q205	8-729-920-74	TRANSISTOR 2SC2412K-QR	(KV-32TS20(U) ONLY)
Q209	8-729-216-22	TRANSISTOR 2SA1162-G	
Q210	8-729-920-74	TRANSISTOR 2SC2412K-QR	(KV-32TS20(U) ONLY)
Q401	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q402	8-729-920-74	TRANSISTOR 2SC2412K-QR	(KV-32TS20(U) ONLY)
Q403	8-729-920-74	TRANSISTOR 2SC2412K-QR	(KV-32TS20(U) ONLY)
Q404	8-729-920-74	TRANSISTOR 2SC2412K-QR	(KV-32TS20(U) ONLY)
Q405	8-729-920-74	TRANSISTOR 2SC2412K-QR	(KV-32TS20(U) ONLY)
Q406	8-729-920-74	TRANSISTOR 2SC2412K-QR	(KV-32TS35(U/C) ONLY)

<RESISTOR>

JR201	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR202	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR203	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR204	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR205	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR207	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR215	1-216-295-00	METAL GLAZE	0	5%	1/10W	(KV-32TS35(U/C) ONLY)
JR216	1-216-295-00	METAL GLAZE	0	5%	1/10W	(KV-32TS35(U/C) ONLY)
JR217	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR220	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR221	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR222	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR223	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR224	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR230	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR231	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR232	1-216-295-00	METAL GLAZE	0	5%	1/10W	(KV-32TS20(U) ONLY)
R200	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R201	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R202	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R204	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R206	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R207	1-216-121-00	METAL GLAZE	1M	5%	1/10W	
R208	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R209	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R210	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R211	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R212	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R213	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R214	1-249-440-11	CARBON	82K	5%	1/4W	
R219	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R220	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R222	1-216-089-00	METAL GLAZE	47K	5%	1/10W	(KV-32TS20(U) ONLY)
R226	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R227	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R228	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R229	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R230	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R231	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R232	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R234	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R237	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R238	1-216-049-00	METAL GLAZE	1K	5%	1/10W	

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REF.NO.	PART NO.	DESCRIPTION				REMARK
R239	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R249	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R250	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R251	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R252	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R253	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R255	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R256	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R257	1-216-099-00	METAL GLAZE	120K	5%	1/10W	
R258	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R259	1-216-025-00	METAL GLAZE	100	5%	1/10W	(KV-32TS20(U) ONLY)
R260	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R261	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R263	1-216-025-00	METAL GLAZE	100	5%	1/10W	(KV-32TS20(U) ONLY)
R265	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R266	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R267	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R268	1-216-089-00	METAL GLAZE	47K	5%	1/10W	(KV-32TS20(U) ONLY)
R269	1-216-089-00	METAL GLAZE	47K	5%	1/10W	(KV-32TS20(U) ONLY)
R270	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R271	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R272	1-216-047-00	METAL GLAZE	820	5%	1/10W	(KV-32TS20(U) ONLY)
	1-216-295-00	METAL GLAZE	0	5%	1/10W	(KV-32TS35(U/C) ONLY)
R273	1-249-482-11	CARBON	4.7	5%	1/2W F	
R290	1-216-133-00	METAL GLAZE	3.3M	5%	1/10W	
R291	1-216-133-00	METAL GLAZE	3.3M	5%	1/10W	
R292	1-216-129-00	METAL GLAZE	2.2M	5%	1/10W	
R293	1-216-133-00	METAL GLAZE	3.3M	5%	1/10W	
R294	1-216-133-00	METAL GLAZE	3.3M	5%	1/10W	
R295	1-216-133-00	METAL GLAZE	3.3M	5%	1/10W	
R296	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R401	1-216-023-00	METAL GLAZE	82	5%	1/10W	
R402	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R403	1-216-103-00	METAL GLAZE	180K	5%	1/10W	
R404	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R405	1-216-103-00	METAL GLAZE	180K	5%	1/10W	
R406	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R407	1-216-103-00	METAL GLAZE	180K	5%	1/10W	
R408	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R409	1-216-103-00	METAL GLAZE	180K	5%	1/10W	
R410	1-216-023-00	METAL GLAZE	82	5%	1/10W	
R411	1-216-023-00	METAL GLAZE	82	5%	1/10W	
R412	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R413	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R414	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R415	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R416	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R417	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R418	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R419	1-216-033-00	METAL GLAZE	220	5%	1/10W	(KV-32TS20(U) ONLY)
	1-216-295-00	METAL GLAZE	0	5%	1/10W	(KV-32TS35(U/C) ONLY)
R420	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R421	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R422	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R424	1-216-089-00	METAL GLAZE	47K	5%	1/10W	(KV-32TS20(U) ONLY)
R425	1-216-089-00	METAL GLAZE	47K	5%	1/10W	(KV-32TS20(U) ONLY)
R426	1-216-089-00	METAL GLAZE	47K	5%	1/10W	(KV-32TS20(U) ONLY)
R427	1-216-089-00	METAL GLAZE	47K	5%	1/10W	(KV-32TS20(U) ONLY)
R428	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	(KV-32TS20(U) ONLY)
R429	1-216-073-00	METAL GLAZE	10K	5%	1/10W	(KV-32TS20(U) ONLY)
R431	1-216-295-00	METAL GLAZE	0	5%	1/10W	(KV-32TS20(U) ONLY)
	1-216-025-00	METAL GLAZE	100	5%	1/10W	(KV-32TS35(U/C) ONLY)
R432	1-216-073-00	METAL GLAZE	10K	5%	1/10W	(KV-32TS35(U/C) ONLY)
R433	1-216-073-00	METAL GLAZE	10K	5%	1/10W	(KV-32TS35(U/C) ONLY)
R434	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	(KV-32TS35(U/C) ONLY)
R460	1-216-049-00	METAL GLAZE	1K	5%	1/10W	(KV-32TS20(U) ONLY)
R461	1-216-089-00	METAL GLAZE	47K	5%	1/10W	(KV-32TS20(U) ONLY)
R462	1-216-089-00	METAL GLAZE	47K	5%	1/10W	(KV-32TS20(U) ONLY)
R463	1-216-295-00	METAL GLAZE	0	5%	1/10W	(KV-32TS20(U) ONLY)
R464	1-216-049-00	METAL GLAZE	1K	5%	1/10W	(KV-32TS20(U) ONLY)

<VARIABLE RESISTOR>

RV205	1-238-015-11	RES, ADJ, CARBON 4.7K	
RV250	1-226-772-11	RES, ADJ, METAL GLAZE 4.7K	

****

*A-1331-128-A C BOARD, COMPLETE
****

*4-379-160-01 COVER (REAR LID), CV
*4-379-167-01 COVER (MAIN), CV

<CONNECTOR>

C1	*1-506-371-00	PIN, CONNECTOR 2P	
C2	*1-508-768-00	PIN, CONNECTOR (5MM PITCH) 6P	
C3	*1-564-509-11	PLUG, CONNECTOR 6P	

<CAPACITOR>

C701	1-136-601-11	FILM	0.01MF	10%	630V
C702	1-162-116-00	CERAMIC	680PF	10%	2KV
C704	1-124-915-11	ELECT	10MF	20%	63V
C705	1-164-083-11	CERAMIC	680PF	10%	50V
C706	1-164-083-11	CERAMIC	680PF	10%	50V
C707	1-164-083-11	CERAMIC	680PF	10%	50V
C708	1-164-081-11	CERAMIC	470PF	10%	50V
C709	1-164-081-11	CERAMIC	470PF	10%	50V
C710	1-164-081-11	CERAMIC	470PF	10%	50V
C712	1-124-477-11	ELECT	47MF	20%	16V
C721	1-161-754-00	CERAMIC	0.001MF	10%	2KV
C722	1-162-622-11	CERAMIC	330PF	10%	6.3KV

C E

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION				REMARK
		<DIODE>				
D701	8-719-911-19	DIODE 1SS119				
D702	8-719-911-19	DIODE 1SS119				
D703	8-719-911-19	DIODE 1SS119				
		<JACK>				
J701	⚠1-540-071-13	SOCKET, PICTURE TUBE				
		<COIL>				
L701	1 408-417-00	INDUCTOR	47UH			
		<NEON LAMP>				
NL701	1-519-108-99	LAMP,NEON ASSY				
		<TRANSISTOR>				
Q701	8-729-423-37	TRANSISTOR 2SC3311A-QRS				
Q702	8-729-326-11	TRANSISTOR 2SC2611				
Q703	8-729-423-37	TRANSISTOR 2SC3311A-QRS				
Q704	8-729-326-11	TRANSISTOR 2SC2611				
Q705	8-729-423-37	TRANSISTOR 2SC3311A-QRS				
Q706	8-729-326-11	TRANSISTOR 2SC2611				
		<RESISTOR>				
R701	1-202-838-00	SOLID	100K	10%	1/2W	
R702	1-216-391-11	METAL OXIDE	1.5	5%	3W	F
R703	1-202-842-11	SOLID	220K	10%	1/2W	
R704	1-202-846-00	SOLID	470K	10%	1/2W	
R705	1-202-837-00	SOLID	82K	10%	1/2W	
R706	1-202-549-00	SOLID	100	10%	1/2W	
R707	1-202-842-11	SOLID	220K	10%	1/2W	
R708	1-202-824-00	SOLID	3.3K	10%	1/2W	
R709	1-202-824-00	SOLID	3.3K	10%	1/2W	
R710	1-202-553-31	SOLID	150	10%	1/2W	
R711	1-249-411-11	CARBON	330	5%	1/4W	
R712	1-249-411-11	CARBON	330	5%	1/4W	
R713	1-202-824-00	SOLID	3.3K	10%	1/2W	
R714	1-249-405-11	CARBON	100	5%	1/4W	
R715	1-249-422-11	CARBON	2.7K	5%	1/4W	
R716	1-249-414-11	CARBON	560	5%	1/4W	
R718	1-249-393-11	CARBON	10	5%	1/4W	
R719	1-249-419-11	CARBON	1.5K	5%	1/4W	
R720	1-249-415-11	CARBON	680	5%	1/4W	
R722	1-215-923-00	METAL OXIDE	10K	5%	3W	F
R723	1-249-414-11	CARBON	560	5%	1/4W	
R725	1-249-422-11	CARBON	2.7K	5%	1/4W	
R726	1-249-393-11	CARBON	10	5%	1/4W	
R727	1-249-419-11	CARBON	1.5K	5%	1/4W	
R728	1-249-415-11	CARBON	680	5%	1/4W	
R729	1-249-411-11	CARBON	330	5%	1/4W	
R730	1-215-923-00	METAL OXIDE	10K	5%	3W	F
R732	1-249-412-11	CARBON	390	5%	1/4W	
R733	1-249-422-11	CARBON	2.7K	5%	1/4W	
R734	1-249-422-11	CARBON	2.7K	5%	1/4W	
R735	1-249-393-11	CARBON	10	5%	1/4W	
R737	1-215-923-00	METAL OXIDE	10K	5%	3W	F
R738	1-202-719-00	SOLID	1M	10%	1/2W	
R739	1-202-842-11	SOLID	220K	10%	1/2W	
R740	1-202-842-11	SOLID	220K	10%	1/2W	
		<VARIABLE RESISTOR>				
RV701	⚠1-230-619-11	RES, ADJ, METAL GLAZE 110M				
RV702	1-228-993-00	RES, ADJ, CARBON 4.7K				
RV703	1-228-991-00	RES, ADJ, CARBON 2.2K				
RV704	1-228-993-00	RES, ADJ, CARBON 4.7K				
RV705	1-228-991-00	RES, ADJ, CARBON 2.2K				
RV706	1-228-993-00	RES, ADJ, CARBON 4.7K				
RV707	1-228-995-00	RES, ADJ, CARBON 22K				
RV708	1-230-641-11	RES, ADJ, METAL GLAZE 2.2M				
**********						
	A-1345-954-A	E BOARD, COMPLETE				
		**********				
		<CAPACITOR>				
C551	1-124-925-11	ELECT	2.2MF	20%	50V	
C553	1-124-907-11	ELECT	10MF	20%	50V	
C554	1-124-912-11	ELECT	330MF	20%	50V	
C556	1-124-925-11	ELECT	2.2MF	20%	50V	
C557	1-124-925-11	ELECT	2.2MF	20%	50V	
C558	1-124-922-11	ELECT	1000MF	20%	50V	
C559	1-136-165-00	FILM	0.1MF	5%	50V	
C560	1-130-477-00	MYLAR	0.0033MF	5%	50V	
C561	1-106-367-00	MYLAR	0.01MF	10%	100V	
C562	1-124-907-11	ELECT	10MF	20%	50V	
C563	1-124-907-11	ELECT	10MF	20%	50V	
C564	1-124-925-11	ELECT	2.2MF	20%	50V	
C565	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C566	1-136-159-00	FILM	0.033MF	5%	50V	
C567	1-130-477-00	MYLAR	0.0033MF	5%	50V	
C568	1-124-922-11	ELECT	1000MF	20%	50V	
C569	1-124-910-11	ELECT	47MF	20%	50V	
C570	1-126-233-11	ELECT	22MF	20%	50V	
C571	1-124-477-11	ELECT	47MF	20%	16V	
C572	1-124-911-11	ELECT	220MF	20%	50V	
C573	1-130-309-00	FILM	0.033MF	5%	100V	
C574	1-106-363-00	MYLAR	0.0068MF	10%	100V	
C575	1-124-478-11	ELECT	100MF	20%	25V	
C577	1-126-103-11	ELECT	470MF	20%	16V	
C578	1-124-480-11	ELECT	470MF	20%	25V	
C579	1-124-925-11	ELECT	2.2MF	20%	50V	
C580	1-130-497-00	MYLAR	0.15MF	5%	50V	
C581	1-124-925-11	ELECT	2.2MF	20%	50V	
C582	1-124-925-11	ELECT	2.2MF	20%	50V	
C583	1-124-927-11	ELECT	4.7MF	20%	50V	
C584	1-124-927-11	ELECT	4.7MF	20%	50V	
C1520	1-106-351-00	MYLAR	0.0022MF	10%	100V	
C1522	1-124-925-11	ELECT	2.2MF	20%	50V	
C1534	1-106-351-00	MYLAR	0.0022MF	10%	100V	
C1536	1-106-383-00	MYLAR	0.047MF	10%	100V	
C1538	1-124-907-11	ELECT	10MF	20%	50V	
C1539	1-124-925-11	ELECT	2.2MF	20%	50V	
C1540	1-106-343-00	MYLAR	0.001MF	10%	100V	
C1541	1-124-927-11	ELECT	4.7MF	20%	50V	
C1542	1-124-927-11	ELECT	4.7MF	20%	50V	
C1543	1-124-925-11	ELECT	2.2MF	20%	50V	
C1544	1-124-927-11	ELECT	4.7MF	20%	50V	
C1545	1-124-767-00	ELECT	2.2MF	20%	50V	
C1548	1-124-925-11	ELECT	2.2MF	20%	50V	

E

REF.NO.	PART NO.	DESCRIPTION	REMARK
		<DIODE>	
D552	8-719-110-72	DIODE RD30ES-B2	
D553	8-719-404-46	DIODE MA110	
D554	8-719-404-46	DIODE MA110	
D555	8-719-911-55	DIODE UO5G	
D1520	8-719-109-88	DIODE RD5.6ES-B1	
D1521	8-719-404-46	DIODE MA110	
D1522	8-719-404-46	DIODE MA110	
D1523	8-719-404-46	DIODE MA110	
D1524	8-719-404-46	DIODE MA110	
		<CONNECTOR>	
DY2	*1 508-765-00	PIN, CONNECTOR (5MM PITCH) 3P	
E2	*1-564-507-11	PLUG, CONNECTOR 4P	
E5	1-573-301-11	CONNECTOR, BOARD TO BOARD 20P	
		<IC>	
IC551	8-759-945-58	IC RC4558P	
IC552	8-759-929-62	IC LM7812CT	
		<COIL>	
L551	1-410-748-11	INDUCTOR 15MMH	
L552	1-459-104-00	COIL, WITH CORE	
		<TRANSISTOR>	
Q551	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q552	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q553	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q554	8-729-107-84	TRANSISTOR 2SC3623A-L	
Q555	8-729-107-84	TRANSISTOR 2SC3623A-L	
Q556	8-729-122-03	TRANSISTOR 2SA1220A-P	
Q557	8-729-169-02	TRANSISTOR 2SC2690A-Q	
Q558	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q559	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1520	8-729-920-74	TRANSISTOR 2SC2412K-QR	
		<RESISTOR>	
R551	1-216-043-00	METAL GLAZE 560 5% 1/10W	
R552	1-216-029-00	METAL GLAZE 150 5% 1/10W	
R553	1-216-043-00	METAL GLAZE 560 5% 1/10W	
R554	1-216-043-00	METAL GLAZE 560 5% 1/10W	
R555	1-216-674-11	METAL CHIP 9.1K 0.50% 1/10W	
R556	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R557	1-215-869-11	METAL OXIDE 1K 5% 1W	F
R558	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W	
R559	1-216-083-00	METAL GLAZE 27K 5% 1/10W	
R561	1-216-371-00	METAL OXIDE 1.5 5% 2W	F
R562	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R563	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R564	1-216-043-00	METAL GLAZE 560 5% 1/10W	
R566	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R567	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R568	1-247-700-11	CARBON 100 5% 1/4W	F
R570	1-216-063-00	METAL GLAZE 3.9K 5% 1/10W	
R571	1-216-085-00	METAL GLAZE 33K 5% 1/10W	
R572	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R573	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R574	1-216-073-00	METAL GLAZE 10K 5% 1/10W	

REF.NO.	PART NO.	DESCRIPTION	REMARK
R575	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R576	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R577	1-247-688-11	CARBON 10 5% 1/4W	F
R578	1-249-437-11	CARBON 47K 5% 1/4W	
R579	1-249-421-11	CARBON 2.2K 5% 1/4W	
R580	1-216-085-00	METAL GLAZE 33K 5% 1/10W	
R581	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R583	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
R584	1-249-425-11	CARBON 4.7K 5% 1/4W	
R585	1-216-085-00	METAL GLAZE 33K 5% 1/10W	
R586	1-249-426-11	CARBON 5.6K 5% 1/4W	
R587	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R588	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R590	1-216-075-00	METAL GLAZE 12K 5% 1/10W	
R591	1-216-093-00	METAL GLAZE 68K 5% 1/10W	
R592	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R593	1-216-093-00	METAL GLAZE 68K 5% 1/10W	
R594	1-216-083-00	METAL GLAZE 27K 5% 1/10W	
R595	1-249-439-11	CARBON 68K 5% 1/4W	
R596	1-216-091-00	METAL GLAZE 56K 5% 1/10W	
R597	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R598	1-216-091-00	METAL GLAZE 56K 5% 1/10W	
R599	1-249-397-11	CARBON 22 5% 1/4W	
R1501	1-249-397-11	CARBON 22 5% 1/4W	
R1502	1-249-414-11	CARBON 560 5% 1/4W	
R1503	1-216-085-00	METAL GLAZE 33K 5% 1/10W	
R1504	1-247-694-11	CARBON 33 5% 1/4W	F
R1505	1-249-423-11	CARBON 3.3K 5% 1/4W	
R1506	1-249-393-11	CARBON 10 5% 1/4W	F
R1507	1-216-077-00	METAL GLAZE 15K 5% 1/10W	
R1508	1-249-419-11	CARBON 1.5K 5% 1/4W	
R1509	1-216-077-00	METAL GLAZE 15K 5% 1/10W	
R1510	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R1511	1-249-393-11	CARBON 10 5% 1/4W	F
R1514	1-216-085-00	METAL GLAZE 33K 5% 1/10W	
R1515	1-216-085-00	METAL GLAZE 33K 5% 1/10W	
R1516	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R1517	1-215-920-11	METAL OXIDE 3.3K 5% 3W	F
R1520	1-216-091-00	METAL GLAZE 56K 5% 1/10W	
R1521	1-216-063-00	METAL GLAZE 3.9K 5% 1/10W	
R1522	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R1523	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R1524	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R1525	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R1526	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R1527	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R1528	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R1529	1-216-103-00	METAL GLAZE 180K 5% 1/10W	
R1530	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R1531	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R1532	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R1533	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R1534	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1535	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R1536	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R1537	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R1538	1-216-113-00	METAL GLAZE 470K 5% 1/10W	
R1539	1-216-113-00	METAL GLAZE 470K 5% 1/10W	
R1540	1-216-105-00	METAL GLAZE 220K 5% 1/10W	
R1541	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R1544	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R1545	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R1546	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R1547	1-216-075-00	METAL GLAZE 12K 5% 1/10W	

E D

REF.NO.	PART NO.	DESCRIPTION				REMARK
R1548	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1549	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R1550	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R1551	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R1552	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R1553	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1554	1-247-753-11	CARBON	1.2K	5%	1/2W	
R1556	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R1557	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R1558	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R1559	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R1561	1-247-753-11	CARBON	1.2K	5%	1/2W	
R1571	1-215-920-11	METAL OXIDE	3.3K	5%	3W	F
		<VARIABLE RESISTOR>				
RV550	1-238-549-11	RES, ADJ, CARBON 47K				
RV551	1-238-543-11	RES, ADJ, CARBON 470				
RV552	1-238-550-11	RES, ADJ, CARBON 100K				
RV553	1-238-549-11	RES, ADJ, CARBON 47K				
RV554	1-238-544-11	RES, ADJ, CARBON 1K				
RV555	1-238-550-11	RES, ADJ, CARBON 100K				
RV556	1-238-550-11	RES, ADJ, CARBON 100K				
RV557	1-238-547-11	RES, ADJ, CARBON 10K				
RV558	1-238-549-11	RES, ADJ, CARBON 47K				
RV559	1-238-547-11	RES, ADJ, CARBON 10K				
RV560	1-238-549-11	RES, ADJ, CARBON 47K				
RV561	1-238-546-11	RES, ADJ, CARBON 4.7K				
RV562	1-238-552-11	RES, ADJ, CARBON 470K				
		<SWITCH>				
S551	1-554-186-00	SWITCH, LEVER				
		**********				
	*A-1345-962-A	D BOARD, COMPLETE (KV-32TS20(U) ONLY)				
		**********				
	*A-1345-955-A	D BOARD, COMPLETE (KV-32TS35(U) ONLY)				
		**********				
	*A-1345-991-A	D BOARD, COMPLETE (KV-32TS35(C) ONLY)				
		**********				
	*4-032-238-01	SHIELD, TRANSFORMER				
	*4-032-240-01	SUPPORT, B				
	*4-032-369-01	SHEET, RADIATION				
	*4-341-751-01	EYELET (EY19,EY20,EY25-EY35,EY38-EY44, EY46,EY48-EY52,EY73-EY76,EY90-EY107)				
	*4-341-752-01	EYELET (EY1,EY2,EY4-EY17,EY21-EY24,EY53, EY54,EY59-EY64,EY66-68,EY70-EY72, EY79-EY84)				
	*4-381-724-01	HOLDER, IC				
	4-382-854-11	SCREW (M3X10), P, SW (+)				
	*4-393-401-01	SPRING				
		<CAPACITOR>				
C101	1-124-907-11	ELECT	10MF	20%	50V	
C102	1-126-101-11	ELECT	100MF	20%	16V	
C104	1-126-101-11	ELECT	100MF	20%	16V	
C105	1-130-481-00	MYLAR	0.0068MF	5%	50V	
C106	1-130-483-00	MYLAR	0.01MF	5%	50V	
C107	1-124-499-11	ELECT	1MF	20%	50V	
C108	1-124-499-11	ELECT	1MF	20%	50V	
C109	1-124-499-11	ELECT	1MF	20%	50V	
C110	1-124-903-11	ELECT	1MF	20%	50V	
C111	1-164-039-11	CERAMIC	3PF	0.25PF	50V	
C112	1-126-233-11	ELECT	22MF	20%	50V	
C113	1-164-054-11	CERAMIC	22PF	5%	50V	
C114	1-124-907-11	ELECT	10MF	20%	50V	
C115	1-124-907-11	ELECT	10MF	20%	50V	
C116	1-124-907-11	ELECT	10MF	20%	50V	
C117	1-124-907-11	ELECT	10MF	20%	50V	
C118	1-124-907-11	ELECT	10MF	20%	50V	
C119	1-126-233-11	ELECT	22MF	20%	50V	
C120	1-130-483-00	MYLAR	0.01MF	5%	50V	
C121	1-101-006-00	CERAMIC	0.047MF		50V	
C122	1-164-066-11	CERAMIC	68PF	5%	50V	
C123	1-136-161-00	FILM	0.047MF	5%	50V	
C124	1-102-978-00	CERAMIC	220PF	5%	50V	
C125	1-124-903-11	ELECT	1MF	20%	50V	
C126	1-124-907-11	ELECT	10MF	20%	50V	
C127	1-164-082-11	CERAMIC	560PF	10%	50V	
C128	1-124-477-11	ELECT	47MF	20%	16V	
C129	1-130-479-00	MYLAR	0.0047MF	5%	50V	
C131	1-124-443-00	ELECT	100MF	20%	10V	
C133	1-126-935-11	ELECT	470MF	20%	16V	
C134	1-124-360-00	ELECT	1000MF	20%	16V	
C135	1-124-360-00	ELECT	1000MF	20%	16V	
C136	1-164-066-11	CERAMIC	68PF	5%	50V	
C137	1-164-066-11	CERAMIC	68PF	5%	50V	
C138	1-164-066-11	CERAMIC	68PF	5%	50V	
C139	1-164-066-11	CERAMIC	68PF	5%	50V	
C140	1-164-066-11	CERAMIC	68PF	5%	50V	
C141	1-164-066-11	CERAMIC	68PF	5%	50V	
C142	1-124-903-11	ELECT	1MF	20%	50V	
C143	1-124-360-00	ELECT	1000MF	20%	16V	
C172	1-101-006-00	CERAMIC	0.047MF		50V	
C173	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C174	1-126-935-11	ELECT	470MF	20%	16V	
C176	1-126-935-11	ELECT	470MF	20%	16V	
C329	1-124-477-11	ELECT	47MF	20%	16V	
C345	1-124-907-11	ELECT	10MF	20%	50V	
C346	1-124-903-11	ELECT	1MF	20%	50V	
C351	1-124-907-11	ELECT	10MF	20%	50V	
C352	1-124-907-11	ELECT	10MF	20%	50V	
C353	1-124-477-11	ELECT	47MF	20%	16V	
C354	1-124-477-11	ELECT	47MF	20%	16V	
C355	1-126-233-11	ELECT	22MF	20%	25V	
C356	1-126-233-11	ELECT	22MF	20%	25V	
C357	1-124-478-11	ELECT	100MF	20%	25V	
C358	1-124-478-11	ELECT	100MF	20%	25V	
C359	1-101-004-00	CERAMIC	0.01MF		50V	
C360	1-101-004-00	CERAMIC	0.01MF		50V	
C361	1-124-902-00	ELECT	0.47MF	20%	50V	
C363	1-124-477-11	ELECT	47MF	20%	16V	
C430	1-126-233-11	ELECT	22MF	20%	25V	
C431	1-124-907-11	ELECT	10MF	20%	50V	
C432	1-136-167-00	FILM	0.15MF	5%	50V	
C433	1-136-153-00	FILM	0.01MF	5%	50V	
C434	1-136-153-00	FILM	0.01MF	5%	50V	
C435	1-136-167-00	FILM	0.15MF	5%	50V	
C436	1-124-907-11	ELECT	10MF	20%	50V	
C437	1-136-161-00	FILM	0.047MF	5%	50V	
C438	1-124-360-00	ELECT	1000MF	20%	16V	
C439	1-124-119-00	ELECT	330MF	20%	16V	
C440	1-124-907-11	ELECT	10MF	20%	50V	
C441	1-124-907-11	ELECT	10MF	20%	50V	
C442	1-124-907-11	ELECT	10MF	20%	50V	
C444	1-164-085-11	CERAMIC	0.001MF	10%	50V	

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REF.NO.	PART NO.	DESCRIPTION				REMARK
C445	1-124-903-11	ELECT	1MF	20%	50V	
C446	1-124-903-11	ELECT	1MF	20%	50V	
C501	1-136-173-00	FILM	0.47MF	5%	50V	
C502	1-164-081-11	CERAMIC	470PF	10%	50V	
C503	1-102-244-00	CERAMIC	220PF	10%	500V	
C504	1-136-187-11	FILM	0.047MF	10%	250V	
C505	1-162-116-00	CERAMIC	680PF	10%	2KV	
C506	1-162-116-00	CERAMIC	680PF	10%	2KV	
C507	1-106-351-00	MYLAR	0.0022MF		200V	
C508	⚠1-161-731-51	CERAMIC	0.001MF	10%	2KV	
C509	1-123-024-21	ELECT	33MF		160V	
C510	1-108-964-11	MYLAR	0.27MF	10%	200V	
C511	1-136-598-11	FILM	3MF	5%	200V	
C512	1-123-946-00	ELECT	4.7MF	20%	250V	
C513	1-164-081-11	CERAMIC	470PF	10%	50V	
C514	1-102-228-00	CERAMIC	470PF	10%	500V	
C515	⚠1-136-952-11	FILM	0.02MF	3%	1.4KV	
C516	⚠1-136-316-51	FILM	0.056MF	5%	630V	
C517	1-136-597-11	FILM	0.89MF	5%	200V	
C518	1-162-318-11	CERAMIC	0.001MF	10%	500V	
C519	1-124-046-00	ELECT	10MF	20%	160V	
C521	1-162-117-00	CERAMIC	100PF	10%	500V	
C522	1-124-922-11	ELECT	1000MF	20%	50V	
C523	1-162-117-00	CERAMIC	100PF	10%	500V	
C524	1-124-557-11	ELECT	1000MF	20%	25V	
C525	1-123-947-00	ELECT	10MF	20%	250V	
C526	1-162-114-00	CERAMIC	0.0047MF		2KV	
C527	1-106-387-00	MYLAR	0.068MF	10%	200V	
C528	1-106-367-00	MYLAR	0.01MF	5%	100V	
C529	1-124-607-11	ELECT	2200MF	20%	50V	
C530	1-124-911-11	ELECT	220MF	20%	50V	
C531	1-130-777-00	FILM	0.1MF	10%	100V	
C532	1-102-030-00	CERAMIC	330PF	10%	500V	
C533	1-130-777-00	FILM	0.1MF	10%	100V	
C534	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C535	1-123-932-00	ELECT	4.7MF	20%	160V	
C536	1-124-477-11	ELECT	47MF	20%	25V	
C538	1-162-134-11	CERAMIC	470PF	10%	2KV	
C539	1-161-959-00	CERAMIC	22PF	10%	500V	
C540	1-162-117-00	CERAMIC	100PF	10%	500V	
C542	1-124-046-00	ELECT	10MF	20%	160V	
C543	1-136-157-00	FILM	0.022MF	5%	50V	
C599	1-123-024-21	ELECT	33MF		160V	
C602	1-101-006-00	CERAMIC	0.047MF		50V	
C603	1-136-165-00	FILM	0.1MF	5%	50V	
C604	1-164-646-11	CERAMIC	2200PF	10%	500V	
C606	1-162-599-12	CERAMIC	0.0047MF	20%	400V	
C607	1-162-599-12	CERAMIC	0.0047MF	20%	400V	
C608	⚠1-125-692-11	ELECT(BLOCK)	820MF	20%	200V	
C609	1-164-645-11	CERAMIC	1000PF	10%	500V	
C610	1-136-165-00	FILM	0.1MF	5%	50V	
C611	1-164-646-11	CERAMIC	2200PF	10%	500V	
C612	1-130-959-00	FILM	0.047MF	10%	400V	
C613	1-130-959-00	FILM	0.047MF	10%	400V	
C614	1-164-645-11	CERAMIC	1000PF	10%	500V	
C615	1-123-024-21	ELECT	33MF		160V	
C616	1-164-644-11	CERAMIC	330PF	10%	500V	
C617	1-136-165-00	FILM	0.1MF	5%	50V	
C618	1-124-119-00	ELECT	330MF	20%	16V	
C619	1-124-557-11	ELECT	1000MF	20%	25V	
C620	1-124-360-00	ELECT	1000MF	20%	16V	
C621	1-124-557-11	ELECT	1000MF	20%	25V	
C622	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C623	1-124-360-00	ELECT	1000MF	20%	16V	
C624	1-161-742-00	CERAMIC	0.0022MF	20%	400V	
C625	1-126-101-11	ELECT	100MF	20%	16V	
C626	1-161-742-00	CERAMIC	0.0022MF	20%	400V	
C633	1-124-360-00	ELECT	1000MF	20%	16V	
C634	1-124-478-11	ELECT	100MF	20%	25V	
C635	1-126-101-11	ELECT	100MF	20%	16V	
C636	1-124-907-11	ELECT	10MF	20%	50V	
C639	1-126-233-11	ELECT	22MF	20%	25V	
C650	1-124-119-00	ELECT	330MF	20%	16V	

<BLOCK>

CM351	1-466-162-31	BLOCK, COM FILTER (CFB-4)

<NETWORK>

CP101	1-236-524-11	NETWORK, C
CP102	1-236-479-11	NETWORK, C
CP103	1-236-301-11	NETWORK, C
CP104	1-236-300-11	NETWORK, C
CP105	1-236-524-11	NETWORK, C
CP106	1-236-301-11	NETWORK, C
CP107	1-236-479-11	NETWORK, C
CP108	1-236-358-21	NETWORK, RES

<CONNECTOR>

D1	*1-564-508-11	PLUG, CONNECTOR 5P (KV-32TS35(U/C) ONLY)
D2	*1-508-768-00	PIN, CONNECTOR (5MM PITCH) 6P
D3	1-573-298-11	CONNECTOR, BOARD TO BOARD 20P
D4	1-573-298-11	CONNECTOR, BOARD TO BOARD 20P
D5	1-573-298-11	CONNECTOR, BOARD TO BOARD 20P
D7	1-573-297-11	CONNECTOR, BOARD TO BOARD 18P
D8	*1-564-506-11	PLUG, CONNECTOR 3P
D9	*1-508-766-00	PIN, CONNECTOR (5MM PITCH) 4P
D10	1-573-297-11	CONNECTOR, BOARD TO BOARD 18P
D15	*1-560-290-00	PLUG, CONNECTOR (2.5MM PITCH)
D18	*1-564-507-11	PLUG, CONNECTOR 4P
D20	*1-564-513-11	PLUG, CONNECTOR 10P(KV-32TS35(U/C) ONLY)
DY1	*1-568-536-11	PLUG (MINIATURE DY) 6P
JL21	*1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P

<DIODE>

D101	8-719-110-78	DIODE RD33ES-B2
D103	8-719-109-74	DIODE RD4.3ES-B1
D104	8-719-911-19	DIODE 1SS119
D105	8-719-911-19	DIODE 1SS119 (KV-32TS20(U) ONLY)
D106	8-719-911-19	DIODE 1SS119 (KV-32TS35(U/C) ONLY)
D107	1-809-401-11	LED UNIT
D108	1-809-401-11	LED UNIT
D109	8-719-911-19	DIODE 1SS119
D110	8-719-911-19	DIODE 1SS119
D111	8-719-911-19	DIODE 1SS119
D112	8-719-911-19	DIODE 1SS119
D113	8-719-911-19	DIODE 1SS119
D114	8-719-911-19	DIODE 1SS119
D115	8-719-109-84	DIODE RD5.1ES-B1
D116	8-719-109-84	DIODE RD5.1ES-B1
D117	8-719-911-19	DIODE 1SS119
D118	8-719-911-19	DIODE 1SS119
D119	8-719-109-84	DIODE RD5.1ES-B1
D120	8-719-911-19	DIODE 1SS119
D431	8-719-911-19	DIODE 1SS119

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REF.NO.	PART NO.	DESCRIPTION	REMARK
D432	8-719-911-19	DIODE 1SS119	
D433	8-719-911-19	DIODE 1SS119 (KV-32TS35(U/C) ONLY)	
D434	8-719-911-19	DIODE 1SS119 (KV-32TS35(U/C) ONLY)	
D504	8-719-945-80	DIODE ERC06-15S	
D505	8-719-945-80	DIODE ERC06-15S	
D506	8-719-900-26	DIODE ERD29-08J	
D507	8-719-302-43	DIODE EL1Z	
D508	8-719-971-20	DIODE ERC38-06	
D509	8-719-979-85	DIODE EGP20G	
D510	8-719-300-33	DIODE RU-3AM	
D511	8-719-976-64	DIODE RGP02-17	
D512	8-719-200-02	DIODE 10E2	
D513	8-719-911-19	DIODE 1SS119 (KV-32TS20(U) ONLY)	
D601	8-719-911-19	DIODE 1SS119	
D602	8-719-510-63	DIODE D4SB60L-F	
D603	8-719-510-48	DIODE D1N20R	
D604	8-719-510-48	DIODE D1N20R	
D605	8-719-510-48	DIODE D1N20R	
D606	8-719-510-48	DIODE D1N20R	
D607	8-719-510-64	DIODE S2LA20F	
D608	8-719-510-64	DIODE S2LA20F	
D609	8-719-510-64	DIODE S2LA20F	
D610	8-719-510-64	DIODE S2LA20F	
D611	8-719-911-19	DIODE 1SS119	
D612	8-719-510-02	DIODE D1NS4	
D613	8-719-911-19	DIODE 1SS119	
D614	8-719-510-02	DIODE D1NS4	
D615	8-719-510-02	DIODE D1NS4	
D616	8-719-510-02	DIODE D1NS4	
D617	8-719-510-02	DIODE D1NS4	
D618	8-719-510-02	DIODE D1NS4	
D619	8-719-510-02	DIODE D1NS4	
D620	8-719-510-02	DIODE D1NS4	
D621	8-719-991-18	DIODE EGP30GL-6072	
D622	8-719-510-02	DIODE D1NS4	
		<FUSE>	
F602	⚠1-532-826-11	FUSE, GLASS TUBE 2.5A/250V	
	1-533-225-11	CLIP, FUSE; F602	
		<COIL>	
FB101	1-412-911-11	INDUCTOR, FERRITE BEAD	
FB601	1-412-911-11	INDUCTOR, FERRITE BEAD	
FB602	1-412-911-11	INDUCTOR, FERRITE BEAD	
FB603	1-412-911-11	INDUCTOR, FERRITE BEAD	
FB604	1-412-911-11	INDUCTOR, FERRITE BEAD	
FB605	1-410-396-41	FERRITE BEAD INDUCTOR	
L101	1-412-911-11	INDUCTOR, FERRITE BEAD	
L102	1-412-911-11	INDUCTOR, FERRITE BEAD	
L106	1-410-669-31	INDUCTOR 33UH	
L502	1-422-613-11	COIL, AIR CORE	
L503	1-459-313-00	COIL WITH CORE (HWC)	
L504	1-459-104-00	COIL, DUST CORE	
L505	1-408-235-00	INDUCTOR 2.2MMH	
L507	1-459-075-00	COIL,DYNAMIC CONVERSION CHOKE	
L508	1-412-519-11	INDUCTOR 3.3UH	
L509	1-412-529-11	INDUCTOR 22UH	
L511	1-408-698-00	INDUCTOR 8.2UH	
L512	1-412-045-11	INDUCTOR 2.2MMH	
L513	1-408-300-00	INDUCTOR 6.8UH	
		<IC>	
IC101	8-759-038-39	IC MC68HC05T7-LSC89919B	
IC102	8-759-500-31	IC X24C01P	
IC103	8-741-100-62	IC SBX1618-51	
IC104	8-759-987-89	IC TDA8444	
IC105	8-759-924-12	IC LM7805CT	
IC352	8-759-982-34	IC RC78M09FA	
IC354	8-759-710-68	IC NJM2245S	
IC355	8-759-710-68	IC NJM2245S	
IC431	8-759-820-63	IC LA7953	
IC501	8-759-402-35	IC AN5521	
IC601	⚠1-809-120-21	MODULE, POWER (DM-43)	
IC602	8-719-156-73	DIODE PS2501-1LB	
IC605	8-759-929-62	IC LM7812CT	
IC606	8-759-924-12	IC LM7805CT	
IC607	8-719-156-73	DIODE PS2501-1LB	
		<JACK>	
J403	1-573-659-11	JACK BLOCK, PIN 3P (KV-32TS35(U/C) ONLY)	
		<MODULE>	
PM501	⚠1-809-492-21	MODULE, PROTECTOR (PM-24)	
		<TRANSISTOR>	
Q101	8-729-423-37	TRANSISTOR 2SC3311A-QRS	
Q103	8-729-423-44	TRANSISTOR 2SA1309A-QRS	
Q104	8-729-423-37	TRANSISTOR 2SC3311A-QRS	
Q105	8-729-423-37	TRANSISTOR 2SC3311A-QRS	
Q106	8-729-423-37	TRANSISTOR 2SC3311A-QRS	
Q107	8-729-423-44	TRANSISTOR 2SA1309A-QRS	
Q108	8-729-423-37	TRANSISTOR 2SC3311A-QRS	
Q109	8-729-423-37	TRANSISTOR 2SC3311A-QRS	
Q122	8-729-900-89	TRANSISTOR DTC144ES	
Q344	8-729-423-37	TRANSISTOR 2SC3311A-QRS	
Q345	8-729-423-37	TRANSISTOR 2SC3311A-QRS	
Q346	8-729-423-37	TRANSISTOR 2SC3311A-QRS	
Q434	8-729-423-37	TRANSISTOR 2SC3311A-QRS	
Q435	8-729-423-37	TRANSISTOR 2SC3311A-QRS	
Q436	8-729-423-44	TRANSISTOR 2SA1309A-QRS	
Q437	8-729-423-44	TRANSISTOR 2SA1309A-QRS	
Q438	8-729-423-44	TRANSISTOR 2SA1309A-QRS	
Q439	8-729-423-44	TRANSISTOR 2SA1309A-QRS	
Q501	8-729-119-80	TRANSISTOR 2SC2688-LK	
Q502	8-729-305-01	TRANSISTOR 2SD1941-07	
Q503	8-729-107-26	TRANSISTOR 2SD1585-K	
Q504	8-729-423-37	TRANSISTOR 2SC3311A-QRS (KV-32TS35(U/C) ONLY)	
Q505	8-729-423-37	TRANSISTOR 2SC3311A-QRS (KV-32TS35(U/C) ONLY)	
Q601	8-729-927-22	TRANSISTOR 2SC4664MNP-F	
Q602	8-729-927-22	TRANSISTOR 2SC4664MNP-F	
Q603	8-729-920-92	TRANSISTOR 2SD2096-EF	
Q604	8-729-423-37	TRANSISTOR 2SC3311A-QRS	
Q605	8-729-423-44	TRANSISTOR 2SA1309A-QRS	
Q606	8-729-423-37	TRANSISTOR 2SC3311A-QRS	
Q610	8-729-200-17	TRANSISTOR 2SA1091-O	
Q613	8-729-931-43	TRANSISTOR 2SC4274-02F9	
Q614	8-729-927-12	TRANSISTOR 2SC4115SQR	
		<RESISTOR>	
R101	1-249-405-11	CARBON 100 5% 1/4W	

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REF.NO.	PART NO.	DESCRIPTION				REMARK
R102	1-249-409-11	CARBON	220	5%	1/4W	
R103	1-249-409-11	CARBON	220	5%	1/4W	
R104	1-249-409-11	CARBON	220	5%	1/4W	
R105	1-249-429-11	CARBON	10K	5%	1/4W	
R106	1-249-437-11	CARBON	47K	5%	1/4W	
R107	1-249-409-11	CARBON	220	5%	1/4W	
R108	1-249-413-11	CARBON	470	5%	1/4W	
R109	1-249-413-11	CARBON	470	5%	1/4W	
R110	1-249-413-11	CARBON	470	5%	1/4W	
R111	1-249-409-11	CARBON	220	5%	1/4W	
R112	1-249-409-11	CARBON	220	5%	1/4W	
R113	1-249-417-11	CARBON	1K	5%	1/4W	
R114	1-249-409-11	CARBON	220	5%	1/4W	
R116	1-249-409-11	CARBON	220	5%	1/4W	
R117	1-249-409-11	CARBON	220	5%	1/4W	
R118	1-249-409-11	CARBON	220	5%	1/4W	
R119	1-249-429-11	CARBON	10K	5%	1/4W	
R120	1-249-409-11	CARBON	220	5%	1/4W	
R121	1-249-425-11	CARBON	4.7K	5%	1/4W	
R122	1-249-409-11	CARBON	220	5%	1/4W	
R123	1-249-409-11	CARBON	220	5%	1/4W	
R124	1-249-409-11	CARBON	220	5%	1/4W	
R125	1-249-430-11	CARBON	12K	5%	1/4W	
R126	1-249-423-11	CARBON	3.3K	5%	1/4W	
R127	1-249-419-11	CARBON	1.5K	5%	1/4W	
R128	1-249-431-11	CARBON	15K	5%	1/4W	
R129	1-249-417-11	CARBON	1K	5%	1/4W	
R130	1-249-421-11	CARBON	2.2K	5%	1/4W	
R131	1-249-429-11	CARBON	10K	5%	1/4W	
R132	1-249-429-11	CARBON	10K	5%	1/4W	
R133	1-249-409-11	CARBON	220	5%	1/4W	
R134	1-249-409-11	CARBON	220	5%	1/4W	
R135	1-249-409-11	CARBON	220	5%	1/4W	
R136	1-249-409-11	CARBON	220	5%	1/4W	
R137	1-249-409-11	CARBON	220	5%	1/4W	
R138	1-249-409-11	CARBON	220	5%	1/4W	
R139	1-249-409-11	CARBON	220	5%	1/4W	
R140	1-249-409-11	CARBON	220	5%	1/4W	
R141	1-249-409-11	CARBON	220	5%	1/4W	
R142	1-249-409-11	CARBON	220	5%	1/4W	
R143	1-249-409-11	CARBON	220	5%	1/4W	
R144	1-249-409-11	CARBON	220	5%	1/4W	
R145	1-249-421-11	CARBON	2.2K	5%	1/4W	
R146	1-249-421-11	CARBON	2.2K	5%	1/4W	
R147	1-249-421-11	CARBON	2.2K	5%	1/4W	
R148	1-249-409-11	CARBON	220	5%	1/4W	
R149	1-249-409-11	CARBON	220	5%	1/4W	
R150	1-249-409-11	CARBON	220	5%	1/4W	
R151	1-249-429-11	CARBON	10K	5%	1/4W	
R152	1-249-409-11	CARBON	220	5%	1/4W	
R153	1-249-429-11	CARBON	10K	5%	1/4W	
R154	1-249-437-11	CARBON	47K	5%	1/4W	
R155	1-249-417-11	CARBON	1K	5%	1/4W	
R156	1-249-409-11	CARBON	220	5%	1/4W	
R157	1-249-417-11	CARBON	1K	5%	1/4W	
R158	1-249-429-11	CARBON	10K	5%	1/4W	
R159	1-249-429-11	CARBON	10K	5%	1/4W	
R160	1-249-405-11	CARBON	100	5%	1/4W	
R161	1-215-923-00	METAL OXIDE	10K	5%	3W	F
R162	1-249-417-11	CARBON	1K	5%	1/4W	
R163	1-247-883-00	CARBON	150K	5%	1/4W	
R164	1-249-437-11	CARBON	47K	5%	1/4W	
R165	1-247-883-00	CARBON	150K	5%	1/4W	
R166	1-249-437-11	CARBON	47K	5%	1/4W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R167	1-247-883-00	CARBON	150K	5%	1/4W	
R168	1-249-437-11	CARBON	47K	5%	1/4W	
R169	1-249-427-11	CARBON	6.8K	5%	1/4W	
R170	1-249-429-11	CARBON	10K	5%	1/4W	(KV-32TS20(U) ONLY)
	1-249-426-11	CARBON	5.6K	5%	1/4W	(KV-32TS35(U/C) ONLY)
R171	1-249-435-11	CARBON	33K	5%	1/4W	
R172	1-249-429-11	CARBON	10K	5%	1/4W	
R173	1-249-425-11	CARBON	4.7K	5%	1/4W	
R174	1-249-428-11	CARBON	8.2K	5%	1/4W	
R175	1-249-425-11	CARBON	4.7K	5%	1/4W	
R176	1-249-440-11	CARBON	82K	5%	1/4W	
R177	1-249-426-11	CARBON	5.6K	5%	1/4W	
R178	1-249-425-11	CARBON	4.7K	5%	1/4W	
R179	1-249-427-11	CARBON	6.8K	5%	1/4W	
R181	1-249-425-11	CARBON	4.7K	5%	1/4W	
R182	1-249-409-11	CARBON	220	5%	1/4W	
R184	1-249-429-11	CARBON	10K	5%	1/4W	
R186	1-247-903-00	CARBON	1M	5%	1/4W	
R187	1-249-441-11	CARBON	100K	5%	1/4W	
R188	1-247-903-00	CARBON	1M	5%	1/4W	
R189	1-249-429-11	CARBON	10K	5%	1/4W	
R190	1-249-429-11	CARBON	10K	5%	1/4W	
R191	1-249-429-11	CARBON	10K	5%	1/4W	
R192	1-249-427-11	CARBON	6.8K	5%	1/4W	
R193	1-249-425-11	CARBON	4.7K	5%	1/4W	
R194	1-249-429-11	CARBON	10K	5%	1/4W	
R195	1-249-429-11	CARBON	10K	5%	1/4W	
R196	1-249-429-11	CARBON	10K	5%	1/4W	
R197	1-249-423-11	CARBON	3.3K	5%	1/4W	
R199	1-249-429-11	CARBON	10K	5%	1/4W	
R345	1-249-425-11	CARBON	4.7K	5%	1/4W	
R346	1-249-436-11	CARBON	39K	5%	1/4W	
R347	1-249-435-11	CARBON	33K	5%	1/4W	
R348	1-249-429-11	CARBON	10K	5%	1/4W	
R349	1-249-429-11	CARBON	10K	5%	1/4W	
R350	1-249-429-11	CARBON	10K	5%	1/4W	(KV-32TS35(U/C) ONLY)
R351	1-249-429-11	CARBON	10K	5%	1/4W	(KV-32TS35(U/C) ONLY)
R352	1-249-425-11	CARBON	4.7K	5%	1/4W	
R353	1-249-417-11	CARBON	1K	5%	1/4W	
R354	1-249-414-11	CARBON	560	5%	1/4W	
R355	1-249-414-11	CARBON	560	5%	1/4W	
R356	1-249-414-11	CARBON	560	5%	1/4W	
R357	1-249-414-11	CARBON	560	5%	1/4W	
R358	1-249-417-11	CARBON	1K	5%	1/4W	
R359	1-249-414-11	CARBON	560	5%	1/4W	
R360	1-249-415-11	CARBON	680	5%	1/4W	
R361	1-249-417-11	CARBON	1K	5%	1/4W	
R363	1-249-405-11	CARBON	100	5%	1/4W	
R364	1-249-429-11	CARBON	10K	5%	1/4W	
R365	1-249-437-11	CARBON	47K	5%	1/4W	
R367	1-249-415-11	CARBON	680	5%	1/4W	
R369	1-249-405-11	CARBON	100	5%	1/4W	
R431	1-249-425-11	CARBON	4.7K	5%	1/4W	
R432	1-249-425-11	CARBON	4.7K	5%	1/4W	
R433	1-249-425-11	CARBON	4.7K	5%	1/4W	
R434	1-249-426-11	CARBON	5.6K	5%	1/4W	
R435	1-249-426-11	CARBON	5.6K	5%	1/4W	
R436	1-249-426-11	CARBON	5.6K	5%	1/4W	
R437	1-249-426-11	CARBON	5.6K	5%	1/4W	

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- The components identifited by ⊠ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation.
Should replacement be required, replace only with the value originally used.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION				REMARK
R438	1-249-423-11	CARBON	3.3K	5%	1/4W	
R439	1-249-425-11	CARBON	4.7K	5%	1/4W	
R440	1-249-428-11	CARBON	8.2K	5%	1/4W	
R441	1-249-428-11	CARBON	8.2K	5%	1/4W	
R442	1-249-421-11	CARBON	2.2K	5%	1/4W	
R443	1-249-417-11	CARBON	1K	5%	1/4W	
R444	1-249-423-11	CARBON	3.3K	5%	1/4W	
R445	1-249-429-11	CARBON	10K	5%	1/4W	
R446	1-249-429-11	CARBON	10K	5%	1/4W	
R447	1-249-405-11	CARBON	100	5%	1/4W	
R448	1-249-417-11	CARBON	1K	5%	1/4W	
R449	1-249-405-11	CARBON	100	5%	1/4W	
R450	1-249-391-11	CARBON	6.8	5%	1/4W	
R451	1-249-402-11	CARBON	56	5%	1/4W	
R452	1-249-409-11	CARBON	220	5%	1/4W	
R455	1-249-417-11	CARBON	1K	5%	1/4W	
R456	1-249-405-11	CARBON	100	5%	1/4W	
R457	1-249-405-11	CARBON	100	5%	1/4W	
R494	1-249-405-11	CARBON	100	5%	1/4W	
R497	1-249-405-11	CARBON	100	5%	1/4W	
R501	1-249-405-11	CARBON	100	5%	1/4W	
R502	1-249-423-11	CARBON	3.3K	5%	1/4W	
R503	1-249-426-11	CARBON	5.6K	5%	1/4W	F
R504	⚠1-215-918-51	METAL OXIDE	1.5K	5%	3W	F
R505	1-216-341-11	METAL OXIDE	0.22	5%	1W	F
R506	1-249-401-11	CARBON	47	5%	1/4W	
R508	1-249-455-11	CARBON	4.7	5%	1/4W	F
R509	1-249-423-11	CARBON	3.3K	5%	1/4W	
R510	1-215-896-00	METAL OXIDE	4.7K	5%	2W	F
R512	1-215-861-00	METAL OXIDE	47	5%	1W	F
R513	1-249-417-11	CARBON	1K	5%	1/4W (KV-32TS35(U/C) ONLY)	
R514	⚠1-249-415-91	CARBON	680	5%	1/4W	F
R515	1-249-421-11	CARBON	2.2K	5%	1/4W	
R517	1-249-417-11	CARBON	1K	5%	1/4W (KV-32TS35(U/C) ONLY)	
R518	1-249-417-11	CARBON	1K	5%	1/4W (KV-32TS35(U/C) ONLY)	
R519	1-249-405-11	CARBON	100	5%	1/4W (KV-32TS35(U/C) ONLY)	
R520	1-249-389-11	CARBON	4.7	5%	1/4W	F
R521	1-249-448-11	CARBON	1.2	5%	1/4W	F
R522	1-216-375-00	METAL OXIDE	3.3	5%	2W	F
R523	⚠1-216-345-91	METAL OXIDE	0.47	5%	1W	F
R524	1-216-373-11	METAL OXIDE	2.2	5%	2W	F
R525	⚠1-249-448-91	CARBON	1.2	5%	1/4W	F
R526	⚠1-216-434-91	METAL OXIDE	1.8K	5%	1W	F
R527	1-216-429-00	METAL OXIDE	270	5%	1W	F
R529	1-249-429-11	CARBON	10K	5%	1/4W (KV-32TS35(U/C) ONLY)	
R530	1-249-436-11	CARBON	39K	5%	1/4W	
R534	1-249-435-11	CARBON	33K	5%	1/4W	
R535	1-215-373-31	METAL	10	1%	1/4W	
R536	1-249-425-11	CARBON	4.7K	5%	1/4W	
R537	1-215-468-00	METAL	91K	1%	1/4W	
R538	1-202-838-00	SOLID	100K	10%	1/2W	
R539	1-202-838-00	SOLID	100K	10%	1/2W	
R540	1-202-838-00	SOLID	100K	10%	1/2W	
R541	1-202-838-00	SOLID	100K	10%	1/2W	
⊠R542	⚠	METAL			1/4W	
⊠R543	⚠	METAL			1/4W	
R544	1-249-440-11	CARBON	82K	5%	1/4W	
R545	1-249-417-11	CARBON	1K	5%	1/4W	
R546	1-249-417-11	CARBON	1K	5%	1/4W	F
R547	1-202-833-91	SOLID	18K	10%	1/2W	
R548	1-216-370-11	METAL OXIDE	1.2	5%	2W	F
R549	1-249-425-11	CARBON	4.7K	5%	1/4W	
R603	1-215-900-11	METAL OXIDE	22K	5%	2W	F
R604	⚠1-216-444-91	METAL OXIDE	82K	5%	1W	F
R605	1-216-369-00	METAL OXIDE	1	5%	2W	F
R606	1-215-878-00	METAL OXIDE	33K	5%	1W	F
R607	1-216-377-11	METAL OXIDE	4.7	5%	2W	F
R609	1-216-369-00	METAL OXIDE	1	5%	2W	F
R610	1-215-878-00	METAL OXIDE	33K	5%	1W	F
R611	1-207-645-00	WIREWOUND	0.47	5%	3W	F
R612	1-215-417-00	METAL	680	1%	1/4W	
R613	1-215-477-00	METAL	220K	1%	1/4W	
R614	1-249-441-11	CARBON	100K	5%	1/4W	
R615	1-249-429-11	CARBON	10K	5%	1/4W	
R616	1-247-895-00	CARBON	470K	5%	1/4W	
R617	1-216-377-11	METAL OXIDE	4.7	5%	2W	F
R619	1-249-421-11	CARBON	2.2K	5%	1/4W	
R620	1-247-708-11	CARBON	470	5%	1/4W	F
R621	1-249-429-11	CARBON	10K	5%	1/4W	
R622	1-247-747-11	CARBON	470	5%	1/2W	F
R623	1-249-405-11	CARBON	100	5%	1/4W	F
R626	1-249-389-11	CARBON	4.7	5%	1/4W	F
R628	1-249-423-11	CARBON	3.3K	5%	1/4W	
R629	1-249-416-11	CARBON	820	5%	1/4W	
R630	1-249-416-11	CARBON	820	5%	1/4W	
R631	1-202-730-00	SOLID	8.2M	10%	1/2W	
R632	1-215-892-11	METAL OXIDE	1K	5%	2W	F
R633	1-216-426-11	METAL OXIDE	82	5%	1W	F
R640	1-216-379-11	METAL OXIDE	6.8	5%	2W	F
R645	1-216-379-11	METAL OXIDE	6.8	5%	2W	F
R646	1-249-393-11	CARBON	10	5%	1/4W	
R647	1-249-385-11	CARBON	2.2	5%	1/4W	F
R648	1-249-393-11	CARBON	10	5%	1/4W	F
R649	1-249-409-11	CARBON	220	5%	1/4W	
R650	1-247-713-11	CARBON	1K	5%	1/4W	F
R651	1-249-377-11	CARBON	0.47	5%	1/4W	F
R652	1-249-377-11	CARBON	0.47	5%	1/4W	F
R653	1-249-377-11	CARBON	0.47	5%	1/4W	F
R654	1-249-377-11	CARBON	0.47	5%	1/4W	F
R655	1-249-377-11	CARBON	0.47	5%	1/4W	F
R656	1-249-377-11	CARBON	0.47	5%	1/4W	F
R657	1-249-377-11	CARBON	0.47	5%	1/4W	F
R658	1-249-377-11	CARBON	0.47	5%	1/4W	F
R659	1-249-377-11	CARBON	0.47	5%	1/4W	F

<VARIABLE RESISTOR>

RV101	1-238-023-11	RES, ADJ, CARBON 470K

<SWITCH>

S101	⚠1-571-532-23	SWITCH, TACTIL (POWER)
S102	1-571-532-21	SWITCH, TACTIL
S103	1-571-532-21	SWITCH, TACTIL
S104	1-571-532-21	SWITCH, TACTIL
S105	1-571-532-21	SWITCH, TACTIL
S106	1-571-532-21	SWITCH, TACTIL

<SPARK GAP>

SG501	1-519-422-11	GAP, SPARK

D V

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la securité.
Ne les remplacer que par une piece portant le numero specifié.

REF.NO.	PART NO.	DESCRIPTION	REMARK
		<TRANSFORMER>	
T501	⚠1-437-195-12	TRANSFORMER, HORIZONTAL DRIVE	
T502	⚠1-424-545-11	TRANSFORMER, FERRITE (PMT)	
T503	⚠1-439-502-11	TRANSFORMER ASSY, FLYBACK (NX-2600A3)	
T505	⚠1-460-174-11	TRANSFORMER (HLT)	
T603	1-450-270-11	TRANSFORMER, CONVERTER (CDT)	
T604	1-450-559-11	TRANSFORMER, CONVERTER (PRT)	
T605	1-450-560-11	TRANSFORMER, FERRITE (SBT)	
		<TUNER>	
TU101	⚠1-465-371-11	TUNER, ET (BTP-RA401) (KV-32TS20(U),KV-32TS35(U) ONLY)	
	⚠1-465-371-21	TUNER, ET (BTP-RA401)(KV-32TS35(C) ONLY)	
		<CRYSTAL>	
X101	1-577-082-11	VIBRATOR, CERAMIC	
		**********	
	A-1347-053-A	V BOARD, COMPLETE (KV-32TS35(U/C) ONLY) **********	
		<CAPACITOR>	
C1201	1-124-903-11	ELECT 1MF 20% 50V	
C1202	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
C1203	1-124-903-11	ELECT 1MF 20% 50V	
C1204	1-124-903-11	ELECT 1MF 20% 50V	
C1205	1-124-927-11	ELECT 4.7MF 20% 50V	
C1206	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
C1207	1-124-927-11	ELECT 4.7MF 20% 50V	
C1208	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
C1209	1-126-101-11	ELECT 100MF 20% 16V	
C1210	1-163-037-11	CERAMIC CHIP 0.022MF 10% 25V	
C1211	1-163-093-00	CERAMIC CHIP 10PF 5% 50V	
C1212	1-163-093-00	CERAMIC CHIP 10PF 5% 50V	
C1213	1-163-141-00	CERAMIC CHIP 0.001MF 5% 50V	
C1214	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C1215	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C1216	1-163-101-00	CERAMIC CHIP 22PF 5% 50V	
C1217	1-163-141-00	CERAMIC CHIP 0.001MF 5% 50V	
C1218	1-163-101-00	CERAMIC CHIP 22PF 5% 50V	
C1219	1-163-113-00	CERAMIC CHIP 68PF 5% 50V	
C1220	1-163-113-00	CERAMIC CHIP 68PF 5% 50V	
C1221	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C1222	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C1223	1-124-925-11	ELECT 2.2MF 20% 50V	
C1224	1-124-925-11	ELECT 2.2MF 20% 50V	
C1225	1-163-101-00	CERAMIC CHIP 22PF 5% 50V	
C1226	1-163-101-00	CERAMIC CHIP 22PF 5% 50V	
C1227	1-163-093-00	CERAMIC CHIP 10PF 5% 50V	
C1228	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
C1229	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
C1230	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
C1231	1-124-902-00	ELECT 0.47MF 20% 50V	
C1232	1-136-171-00	FILM 0.33MF 5% 50V	
C1233	1-126-529-11	ELECT 0.47MF 20% 50V	
C1234	1-163-103-00	CERAMIC CHIP 27PF 5% 50V	
C1235	1-124-903-11	ELECT 1MF 20% 50V	
C1236	1-126-101-11	ELECT 100MF 20% 16V	
C1237	1-136-169-00	FILM 0.22MF 5% 50V	
C1238	1-124-907-11	ELECT 10MF 20% 50V	
C1239	1-136-169-00	FILM 0.22MF 5% 50V	
C1240	1-163-103-00	CERAMIC CHIP 27PF 5% 50V	
C1241	1-163-037-11	CERAMIC CHIP 0.022MF 10% 25V	
C1242	1-163-114-00	CERAMIC CHIP 75PF 5% 50V	
C1243	1-126-101-11	ELECT 100MF 20% 16V	
C1244	1-163-125-00	CERAMIC CHIP 220PF 5% 50V	
C1245	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C1248	1-124-477-11	ELECT 47MF 20% 16V	
C1250	1-124-477-11	ELECT 47MF 20% 16V	
C1251	1-126-233-11	ELECT 22MF 20% 25V	
C1252	1-124-477-11	ELECT 47MF 20% 16V	
C1253	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C1254	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C1255	1-124-477-11	ELECT 47MF 20% 16V	
C1256	1-124-477-11	ELECT 47MF 20% 16V	
C1257	1-124-477-11	ELECT 47MF 20% 16V	
C1258	1-124-477-11	ELECT 47MF 20% 16V	
C1259	1-126-101-11	ELECT 100MF 20% 16V	
C1260	1-136-173-00	FILM 0.47MF 5% 50V	
C1261	1-124-477-11	ELECT 47MF 20% 16V	
C1262	1-124-477-11	ELECT 47MF 20% 16V	
C1263	1-124-477-11	ELECT 47MF 20% 16V	
C1264	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C1265	1-163-093-00	CERAMIC CHIP 10PF 5% 50V	
C1266	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C1267	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C1268	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C1269	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C1270	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C1271	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C1272	1-124-477-11	ELECT 47MF 20% 16V	
C1273	1-124-477-11	ELECT 47MF 20% 16V	
C1275	1-164-161-11	CERAMIC CHIP 0.0022MF 10% 50V	
C1276	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C1277	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C1278	1-136-165-00	FILM 0.1MF 5% 50V	
C1279	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C1280	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C1281	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C1282	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C1283	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C1287	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C1288	1-126-103-11	ELECT 470MF 20% 16V	
C1290	1-163-101-00	CERAMIC CHIP 22PF 5% 50V	
		<DIODE>	
D1202	8-719-404-46	DIODE MA110	
		<FILTER>	
FL1200	1-239-140-11	FILTER, LOW PASS	
		<IC>	
IC1200	8-759-517-74	IC MBS1461-12-PSZ-G-BF2	
IC1201	8-759-512-86	IC MB86140P-SH	
IC1202	8-759-983-44	IC MB40176	
IC1203	8-759-512-85	IC MB3511P-SH	
IC1204	8-759-711-23	IC NJM2234L	
IC1205	8-759-711-23	IC NJM2234L	

V **W**

REF.NO.	PART NO.	DESCRIPTION	REMARK
		<COIL>	
L1200	1-408-421-00	INDUCTOR 100UH	
L1201	1-408-419-00	INDUCTOR 68UH	
L1202	1-408-421-00	INDUCTOR 100UH	
L1203	1-408-419-00	INDUCTOR 68UH	
L1204	1-408-413-00	INDUCTOR 22UH	
L1205	1-408-421-00	INDUCTOR 100UH	
		<TRANSISTOR>	
Q1201	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1202	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1203	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1204	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1205	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1206	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1207	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1208	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1209	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1210	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1211	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1212	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1213	8-729-920-74	TRANSISTOR 2SC2412K-QR	
		<RESISTOR>	
JR1201	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR1202	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR1205	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR1208	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR1210	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR1211	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R1201	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R1203	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R1204	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R1205	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1206	1-216-047-00	METAL GLAZE 820 5% 1/10W	
R1207	1-216-027-00	METAL GLAZE 120 5% 1/10W	
R1208	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R1209	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R1210	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R1211	1-216-047-00	METAL GLAZE 820 5% 1/10W	
R1212	1-216-121-00	METAL GLAZE 1M 5% 1/10W	
R1213	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R1214	1-216-121-00	METAL GLAZE 1M 5% 1/10W	
R1215	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R1216	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R1217	1-216-043-00	METAL GLAZE 560 5% 1/10W	
R1218	1-216-043-00	METAL GLAZE 560 5% 1/10W	
R1219	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R1220	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R1221	1-216-115-00	METAL GLAZE 560K 5% 1/10W	
R1222	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R1223	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R1224	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R1225	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R1226	1-216-043-00	METAL GLAZE 560 5% 1/10W	
R1227	1-216-043-00	METAL GLAZE 560 5% 1/10W	
R1228	1-216-043-00	METAL GLAZE 560 5% 1/10W	
R1229	1-216-043-00	METAL GLAZE 560 5% 1/10W	
R1230	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R1231	1-216-045-00	METAL GLAZE 680 5% 1/10W	

REF.NO.	PART NO.	DESCRIPTION	REMARK
R1232	1-216-121-00	METAL GLAZE 1M 5% 1/10W	
R1233	1-216-115-00	METAL GLAZE 560K 5% 1/10W	
R1234	1-216-047-00	METAL GLAZE 820 5% 1/10W	
R1235	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1236	1-216-043-00	METAL GLAZE 560 5% 1/10W	
R1237	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1238	1-216-079-00	METAL GLAZE 18K 5% 1/10W	
R1239	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R1240	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R1241	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1242	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R1243	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R1245	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R1246	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R1247	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R1248	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R1249	1-216-077-00	METAL GLAZE 15K 5% 1/10W	
R1250	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R1251	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R1252	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R1253	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R1254	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1255	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R1256	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R1257	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R1258	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R1259	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1260	1-216-043-00	METAL GLAZE 560 5% 1/10W	
R1261	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R1262	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R1263	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1264	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R1265	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R1266	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R1267	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W	
R1268	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R1269	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R1272	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R1273	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R1274	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R1275	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R1276	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R1277	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1278	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R1279	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R1280	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
		<CONNECTOR>	
V11	*1-564-514-11	PLUG, CONNECTOR 11P	
V20	*1-564-513-11	PLUG, CONNECTOR 10P	
		<CRYSTAL>	
X1201	1-527-722-00	OSCILLATOR, CRYSTAL	
X1202	1-527-722-00	OSCILLATOR, CRYSTAL	

****

*A 1371-749-A W BOARD, COMPLETE
****

<CAPACITOR>

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

W

REF.NO.	PART NO.	DESCRIPTION				REMARK
C2753	1-124-925-11	ELECT	2.2MF	20%	50V	
C2754	1-164-079-11	CERAMIC	330PF	10%	50V	
C2761	1-161-830-00	CERAMIC	0.0047MF		500V	
C2762	1-164-054-11	CERAMIC	22PF	.5%	50V	
C2763	1-123-935-00	ELECT	33MF	20%	160V	
C2764	1-124-120-11	ELECT	220MF	20%	16V	
C2767	1-102-244-00	CERAMIC	220PF	10%	500V	
C2768	1-106-383-00	MYLAR	0.047MF		200V	
C2769	1-124-799-11	ELECT	2.2MF	20%	160V	
C2770	1-106-391-12	MYLAR	0.1MF	10%	200V	
C2771	1-124-907-11	ELECT	10MF	20%	50V	
C2772	1-126-101-11	ELECT	100MF	20%	16V	
C2773	1-106-383-00	MYLAR	0.047MF		200V	
C2774	1-164-064-11	CERAMIC	56PF	5%	50V	
C2775	1-124-120-11	ELECT	220MF	20%	16V	
C2776	1-124-907-11	ELECT	10MF	20%	50V	
C2778	1-164-085-11	CERAMIC	0.001MF	10%	50V	
C2779	1-164-085-11	CERAMIC	0.001MF	10%	50V	
C2780	1-124-907-11	ELECT	10MF	20%	50V	

<DIODE>

D2761	8-719-911-19	DIODE 1SS119	
D2763	8-719-911-19	DIODE 1SS119	
D2764	8-719-911-19	DIODE 1SS119	
D2765	8-719-911-19	DIODE 1SS119	
D2766	8-719-911-19	DIODE 1SS119	
D2767	8-719-110-90	DIODE RD39ES B4	
D2768	8-719-110-90	DIODE RD39ES-B4	

<COIL>

L2762	1-408-418-00	INDUCTOR	56UH
L2763	1-408-417-00	INDUCTOR	47UH

<TRANSISTOR>

Q2761	8-729-423-37	TRANSISTOR	2SC3311A-QRS
Q2762	8-729-423-44	TRANSISTOR	2SA1309A-QRS
Q2763	8-729-208-39	TRANSISTOR	2SA1306A-Y
Q2764	8-729-423-37	TRANSISTOR	2SC3311A-QRS
Q2765	8-729-208-72	TRANSISTOR	2SC3298B-Y
Q2766	8-729-423-37	TRANSISTOR	2SC3311A-QRS
Q2767	8-729-140-96	TRANSISTOR	2SD774-34
Q2768	8-729-423-37	TRANSISTOR	2SC3311A-QRS

<RESISTOR>

R2751	1-249-429-11	CARBON	10K	5%	1/4W	
R2752	1-249-432-11	CARBON	18K	5%	1/4W	
R2753	1-249-437-11	CARBON	47K	5%	1/4W	
R2761	1-249-397-11	CARBON	22	5%	1/4W	F
R2762	1-249-409-11	CARBON	220	5%	1/4W	
R2763	1-249-420-11	CARBON	1.8K	5%	1/4W	
R2764	1-247-736-11	CARBON	56	5%	1/2W	F
R2765	1-249-414-11	CARBON	560	5%	1/4W	F
R2766	1-249-418-11	CARBON	1.2K	5%	1/4W	
R2768	1-249-420-11	CARBON	1.8K	5%	1/4W	
R2769	1-249-385-11	CARBON	2.2	5%	1/4W	F
R2770	1-249-435-11	CARBON	33K	5%	1/4W	
R2771	1-249-427-11	CARBON	6.8K	5%	1/4W	
R2774	1-215-886-11	METAL OXIDE	100	5%	2W	F
R2775	1-249-417-11	CARBON	1K	5%	1/4W	F
R2776	1-249-432-11	CARBON	18K	5%	1/4W	
R2777	1-249-438-11	CARBON	56K	5%	1/4W	
R2778	1-249-429-11	CARBON	10K	5%	1/4W	
R2779	1-249-414-11	CARBON	560	5%	1/4W	
R2780	1-249-419-11	CARBON	1.5K	5%	1/4W	
R2781	1-249-410-11	CARBON	270	5%	1/4W	
R2782	1-249-385-11	CARBON	2.2	5%	1/4W	F
R2783	1-249-441-11	CARBON	100K	5%	1/4W	
R2784	1-249-405-11	CARBON	100	5%	1/4W	
R2785	1-249-402-11	CARBON	56	5%	1/4W	F
R2786	1-249-436-11	CARBON	39K	5%	1/4W	
R2787	1-249-429-11	CARBON	10K	5%	1/4W	
R2788	1-249-417-11	CARBON	1K	5%	1/4W	
R2789	1-249-415-11	CARBON	680	5%	1/4W	
R2790	1-216-451-11	METAL OXIDE	120	5%	2W	F
R2791	1-249-412-11	CARBON	390	5%	1/4W	
R2792	1-216-450-00	METAL OXIDE	82	5%	2W	F

<CONNECTOR>

W2	*1-564-507-11	PLUG, CONNECTOR 4P
W6	*1-564-508-11	PLUG, CONNECTOR 5P

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MISCELLANEOUS
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⚠	1-426-356-11	COIL, DEMAGNETIZATION
⚠	1-451-315-11	DEFLECTION YOKE (Y34FXA)
	1-452-032-00	MAGNET, DISK; 10MM φ
	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM φ
⚠	1-452-579-21	NECK ASSY, PICTURE TUBE (NA322)
	1-544-549-11	SPEAKER
	1-573-657-11	PLUG, 8-PIN
⚠	1-590-492-21	CORD, POWER (WITH CONNECTOR)
V901	⚠ 8-733-723-05	PICTURE TUBE (A80JYV50X)

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ACCESSORIES AND PACKING MATERIALS
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PART NO.	DESCRIPTION	REMARK
1-417-182-11	CONVERTER (EAC-25) (KV-32TS35(C) ONLY)	
1-562-443-11	CONNECTOR, ANTENNA (KV-32TS20(U), KV-32TS35(U) ONLY)	
*4-031-871-01	BAG, PROTECTION	
4-032-388-21	MANUAL, INSTRUCTION	
4-032-388-31	MANUAL, INSTRUCTION (KV-32TS35(C) ONLY)	
*4-032-473-01	CUSHION (UPPER) (ASSY)	
*4-032-474-01	CUSHION (LOWER) (ASSY)	
*4-032-475-01	INDIVIDUAL CARTON	

REMOTE COMMANDER

1-465-773-11	REMOTE COMMANDER (RM-Y102) (KV-32TS35(U/C) ONLY)	
1-465-806-11	REMOTE COMMANDER (RM-791) (KV-32TS20(U) ONLY)	
9-900-029-01	COVER, BATTERY (FOR RM-791)	
9-098-985-01	COVER, BATTERY (FOR RM-Y102)	

9-964-722-01

Sony Corporation
TV Group

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